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Veröffentlichungsversion / Published Version

Zeitschriftenartikel / journal article

Empfohlene Zitierung / Suggested Citation:

Westphal, K. (2020). German-Russian gas relations in face of the energy transition. *Russian Journal of Economics*, 6(4), 406-423. <https://doi.org/10.32609/j.ruje.6.55478>

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German–Russian gas relations in face of the energy transition

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Abstract

Russia is the world's largest gas exporter and Germany is its most important market. Moreover, natural gas is a centerpiece of the Russian economy and the backbone of its energy supply to the Russian population. In terms of its external gas relations, Germany has always kept a special and strategic position, both in terms of volumes, but also in substance. This contribution explores the impact of the energy transition on the bilateral gas relationship. It argues that the bilateral gas relationship has been subjected to various paradigm shifts in the past, but, until recently, the relationship has been seen as in line with the strategic energy triangle of climate change/sustainability, supply security and economic competitiveness. This perception has come into question over two issues: climate change and supply security. Moreover, Germany's authority over the conduct and the legal framework of bilateral gas relations has been increasingly contested, by Brussels, but also horizontally by other EU member states. At this stage, it is very uncertain whether both sides will manage to maintain and redefine their close energy partnership to address climate change. Decarbonizing the gas value chain would be a centerpiece. This would require a political shift away from securitization to decarbonization, not only in Germany, but even more so in the EU, and in particular, in Russia.

Keywords: energy transition, Russia, Germany, natural gas, decarbonization, hydrogen.

JEL classification: F52, F64, P18, Q48.

1. The energy transformation and its impact on traditional geopolitics of fossil fuels

Recent studies in international (energy) politics have started to look at the geopolitics of the energy transformation. The IRENA (2019) report focuses on the geopolitics driven by renewables expansion and argues that energy transformation will have numerous geopolitical implications, reshaping international

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energy relations. It assumes that the major forces of change driven by renewables' expansion are the declining costs of renewables, pollution and climate change, renewable energy targets, technological innovation, and corporate and investor action as well as public opinion. The main steps underpinning energy transition are energy efficiency, the growth of renewables and electrification. More recently, hydrogen and its derivatives have been identified as an important component, in particular for hard-to-abate sectors such as steel, aluminium and aviation etc. (Van de Graaf et al., 2020; Westphal et al., 2020). Technology leaders are emerging (IRENA, 2019; Goldthau et al., 2018) and creating a new dimension in the international political economy of energy. It is assumed that the transition phase creates uncertainty and unpredictability. Thus, energy governance has to tackle the geo/political ramifications (Pastukhova and Westphal, 2020) and aim for a transition that is as smooth as possible.

The IRENA report argues that the energy transformation will have knock-on effects on power relations and alliances among states (IRENA, 2019). On the one hand, it will reshape energy statecraft and alter the relationship in favor of fossil fuel importers. Alliances built around fossil fuels in the past will weaken if hydrocarbons are not replaced with alternative energy sources/carriers such as hydrogen. The transition will also affect the aims and patterns of energy diplomacy. One of the key energy diplomacy relationships in the world revolves around Germany and Russia's natural gas trade.

Traditional geopolitics are related to power relations. The energy transition implies power shifts and alters the political economy on a national and international level. States are repositioning in the international system as their major asset is de-valued (Overland, 2019; IRENA, 2019). At the national level, it inherently entails structural ruptures and challenges incumbent players and their respective roles in the existing system. The IRENA Report assumes that at the international level the incidence of certain types of conflict arising from import dependencies or asymmetries is reduced and competition around fossil fuel reserves alleviated.

Fossil fuel exporters are seen as the losers, not only because their major source of revenues is declining, but also in terms of geopolitical leverage. At the international level, fossil fuel producers are thus vulnerable to the fundamental changes. If petrostates such as Russia, Saudi Arabia or Iraq etc. face declining oil rents their socio-economic model and political systems come under severe pressure. In other words, fossil fuel exporters are not only faced with a devaluation of their natural resources, but increasingly face fundamental challenges to their economic and social system as this resource wealth is part of the social contract and essential to stability and growth in these countries. Obviously, the energy transformation will have knock-on effects along the whole fossil fuel value chain, so disadvantaging transit countries such as Ukraine or Belarus, which gain rents from their midstream part. In turn, the evident beneficiaries are major importing countries which will be able to produce more energy from renewables locally and at home or in cross-border cooperation within "grid communities" (Scholten, 2018) by political choice and not geological circumstances.

The links to foreign and security policy are so close because energy involves a strong role for the state since energy is an area that also cross cuts to security, stability and prosperity. All these are seen as traditional realms of state provision and nurturing. In other words, energy is closely tied to national sovereignty of

both consumer and producer states. For the latter, Daniel Yergin's definition of energy security as "adequate, reliable supplies of energy at reasonable prices in ways that do not jeopardize major national values and objectives" (Yergin, 1988) is paramount. In this regard the energy transition offers new opportunities to shape an energy system which is in line with, and builds upon, major national values and objectives, but of course, environmental and climate concerns have been major drivers.

From a supplier's viewpoint, the other side of the coin of energy security is demand predictability. For Russia, energy security is based on securing Germany and the EU as a strategic and vital market. This is why Gazprom in 2019 announced aims to keep a market share of around 35% plus in Europe (Paraskova, 2019). "Security of exports [...] includes economic, political and social aspects of energy" (Sharples, 2013, p. 686). Gas export revenues have a socioeconomic value for Russia and contribute to the federal budget, the GDP, and serve as an income source. This has allowed for the domestic gas system to be developed and for internal supplies to be delivered at subsidized—and later regulated—prices. This is why national sovereignty over energy resources is a political paradigm. The political value of energy exports stems from Russia's role as a key energy supplier and contributes to its role as a strategic partner (Sharples, 2013). For Russia—as for any other gas supplier that has to make long-term, financially intensive investments—long-term price developments and commitments (Sharples, 2013, p. 685) are essential to ensuring security of exports, but also maintaining foreign and energy policy leverage.

While the above described lenses have been widely used in the past to analyze the German–Russian gas relationship, this contribution looks into climate and environmental policies as a determining factor in the past, present and future relationship. This focus shifts the traditional question of power politics of who defines the rules of the "energy game" towards the issue of guiding paradigms and how they have been received on the other side.

The assumptions of the IRENA (2019) report will be tested here in three dimensions: It will ask how the alliance between Russia and Germany has been developed and framed by Berlin and Moscow over time. It will analyze the "energy diplomacy" and its reference to underlying paradigms and assumptions as a glue of the relationship. Last but not least, this contribution will look at structural changes to grasp the question of power shifts between an exporting and an importing country.

All this taken together makes the German–Russian gas relationship an interesting case to explore the geopolitics of energy transformation. Yet, while the above described "loser-theme" is tangible for coal and oil exporters, the case for natural gas seems less clear-cut. Natural gas has long been viewed as a transitional or even an end fuel (if decarbonized) in a climate neutral world.

2. German–Russian gas relations: An important test case

The German–Russian gas relationship provides an outstanding test case for the "geopolitics of the energy transformation." The role of gas(es) in the future energy mix in Germany and Europe is undeniably a question of vital importance for Russia, both for its economic prosperity, but also its political stance in Europe.

On the other hand, fossil fuel importers such as Germany are seen as winners, both in terms of trade and the percentage of the GDP spent on hydrocarbon imports, but also with regard to its geopolitical room for manoeuvre. “Gazprom is a lynchpin of Russia’s commodity-dependent economy” (Soldatkin, 2019) as gas sales accounted for over 5% of Russia’s \$1.6 trillion annual GDP in 2018.

From a Russian perspective, Germany has been of outstanding importance since it is Russia’s biggest gas customer. Germany has been an integral part of the old and new gas infrastructure to realize the supplies into Europe, because of its large storage capacities, but also because of its geographical position in Europe. Germany still has a large industrial basis: 38% of the overall gas consumption comes from industry, 30% from households (mainly heating), 12% from commerce and services, 13% is electricity generation and 8% is directed into district heating (figures for 2018). While gas consumption has slightly decreased in all other consumer groups over the course of a decade, industrial consumption has risen by 5%.¹ The Covid-19 pandemic has had no major effect on gas consumption given its widespread use in Germany (as of August 2020) (Czechanowsky, 2020). The size of Germany’s gas market with approximately 90 bcm is adding to this picture.

Geopolitics of energy is not a new theme. On the contrary, there is ample research on the geopolitics of fossil fuels. While Russia is primarily described as a geopolitical actor, Germany’s energy relations with Russia are mostly seen through the prism of commercial and market-based transactions rather than foreign policy or geopolitically driven factors. In many cases, Russian actions are thus associated primarily with geopolitics, whereas Germany and the EU are perceived as market actors (Romanova, 2016). Focusing on the impact of energy transformation will require an examination of both sides and a more profound analysis of the relations in terms of substance, density, and patterns (see Bros et al., 2017).

A “geopolitical approach” can be described as energy policies that are subject to foreign and security policy considerations. In this vein, energy is (intended to be) used as a tool to influence political outcomes, achieve foreign policy goals, and as a lever to project power. Geopolitics is then associated with classical power politics, while it should be mentioned here that there is also a strong connection between energy production chains and infrastructure with geology, geography and territory (Scholl and Westphal, 2017). In many cases, economic and political interests converge, which make boundaries between “geo-economics” and geopolitics (see Kardaś, 2014; Dickel et al., 2014; Larsson, 2006; Collins, 2017) fluid. However, concerning discussion of the consequences of the energy transformation both concepts are valid as “[g]eo-economics encompasses both the conversion of economic assets into political influence and the mobilisation of political power to achieve economic goals through a mix of competition and cooperation” (Grevi, 2011, p. 28). A market-based approach can be understood if energy sources are primarily treated as a commodity (or a service) that is traded on the basis of transparent rules, market principles, and clearly defined institutions (Romanova, 2016, p. 858). Commercial exchange is then driven by price signals and contractual relations and determined by infrastructure. Companies are major

¹ <https://de.statista.com/statistik/daten/studie/37985/umfrage/verbrauch-von-erdgas-in-deutschland-nach-abnehmergruppen-2009/>

actors and their strategies of maximizing revenues, maintaining or defending market share shape the relationship. In a market-based approach, governments act as transparent rule providers and guarantors of a stable market framework, whereas governments and state interests dominate energy trade with *ad hoc* and specific arrangements under a geopolitical approach (Romanova, 2016, p. 859).

Moscow's position vis-à-vis the climate agreements has always been ambivalent. Yet it was instrumental in the Kyoto Protocol coming into force. Russia signed the Paris Agreement in 2015 and formally joined in autumn 2019 (Reuters, 2019). On the one hand, the country is not only the fourth largest emitter of greenhouse gases, but also a major fossil fuel exporter. On the other, Russia argues that its energy mix is relatively clean and that emissions have decreased significantly in the 1990s. Beyond that, increased climate ambitions and dedicated actions can be seen as a blow to the Russian economic model, but also as a development that lessens Russia's geopolitical influence.

Berlin in turn has embarked on the *Energiewende*. A “Green Energy Transition” has been on the German political agenda since the 1980s, but has become an explicit part of policies with the Energy Concept of 2010, which were revised in 2011 under the impact of Fukushima and accomplished by a nuclear phase-out by 2022. This article explores how the German (and EU) energy transformation has affected the German–Russian gas relations and takes a long-term perspective to explore how the alliance evolved and changed, how the underlying paradigms and notions have been adapted over time and, last but not least, how (power) relations have been affected by that.

3. Building a “gas alliance”

The idea(l) of mutual interdependence stood at the cradle of the “gas-pipe-deals,” which exemplify *par excellence* the concept of energy diplomacy as part of wider foreign policy. The beginning dates back to 1970 when the first gas exports started from the USSR to Germany (see Fig. 1). For the first 20 years, German–Russian natural gas relations were embedded into a broader relationship in which détente, confidence-building and rapprochement were perceived as a function of economic interdependence for mutual benefits. The gas-for-pipes deals were an inherent piece of the *Ostpolitik* (Högselius, 2013, p. 105–134). Therefore the major underlying paradigm was clearly related to foreign policy with its leitmotif “change through rapprochement.” However, environmental considerations played a role too, albeit one often overlooked. Willy Brandt, Chancellor of West Germany from 1969 to 1974, had demanded “blue skies in the Ruhr area” (UBA, 2011) during the 1961 election campaign. Besides environmental and economic considerations propelling the diversification away from OPEC oil, a major foundation for the gas-pipe-deals however remained “change through rapprochement.” The gas relationship even then faced strong opposition from the US. Following German reunification and in recognition of Moscow's key role in this, a strategic partnership was proclaimed in the early 1990s under the paradigm of “rapprochement through interdependence.”

The fact that German–Russian natural gas relations have had a political significance and have been entangled within the economic, political, and social ties is a major feature. It has created various benefits for both sides. Thus, during

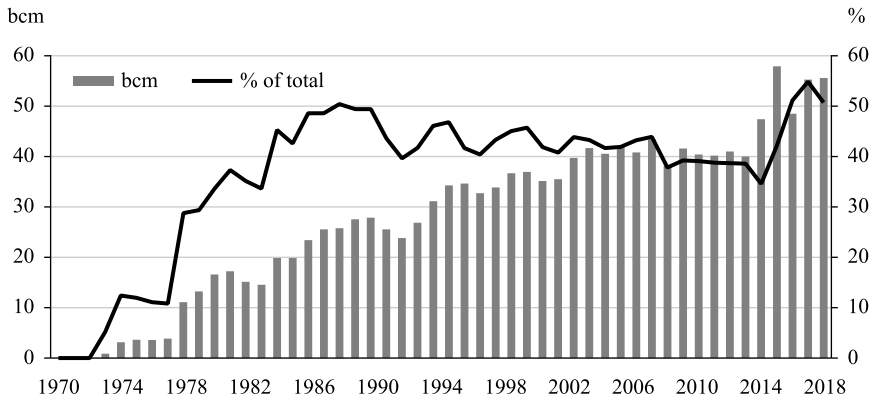


Fig. 1. German gas imports from USSR/Russia, 1970–2018.

Sources: BP; BAFA.

the Cold War, political and economic interests converged. The USSR received Western currency and technology, and West Germany benefited from gas prices lower than those of the Netherlands as well as from the expanding market for German pipe producers and steelmakers. The package included technological cooperation, because German experts helped to fulfil Soviet gas production and transport projects. Bilateral cooperation was thus essential not only for the construction of a common gas infrastructure, but also for the “gasification” of the USSR itself.² For the former Soviet Union, exports were key for the development of the domestic natural gas industry. An integrated “infrastructured” gas space (Högselius, 2013) has been shaped, connecting Soviet gas fields to burners in West German households. This created fixed and long-standing interdependencies, which were governed by the Dutch contract system (Gustafson, 2020) of long-term 20–30 years, oil-indexed delivery contracts, including a minimum take-or-pay obligation to purchase at least 75 to 85% of the named quantity (Energy Charter Secretariat, 2007, pp. 146–163).

The balance of power between the exporter and the importer was achieved by the contractual arrangement. It allowed the two parties to balance the price and volume risks and complementarity was created through the Soviet Union aiming to further develop its hydrocarbon sector and energy infrastructure. Moreover, the price system was designed in a way that gave gas a competitive edge over other fuels in the heating sector. The primary counterpart of Gazprom, the West German Ruhrgas, secured growing demand. These elements created a very reliable, fully fledged relationship; stability arose from the political and economic interest converging, clear trade and contractual relations, growing trade and predictability of demand.

The “alliance” was reformulated after German reunification and the end of the Soviet Union. In the 1990s Germany’s gas market experienced a fierce competition between BASF and Ruhrgas. This resulted in a certain liberalization with both companies fighting over market shares in the reunified German gas market. The German–Russian gas relations, however, remained stable. The gas

² <https://www.gazprom.com/about/history/events/germany40/>

relationship was driven by common economic interests, by growing demand and future perspectives.

The power balance was kept by ever closer ties, asset swaps and package deals, creating bilateral cross-border vertically integrated alliances, which gave the then newly created Russian gas monopolist, Gazprom, access to the German market, and Ruhrgas and BASF Wintershall, in turn, access to Russian gas fields.

During the first twenty years, diversification away from oil and the OPEC states was a driver for natural gas expansion. The idea of green energy, which arose in Germany as early as the 1980s, was driven by sustainability and later a step away from nuclear energy after the impact of Chernobyl. Yet, it took until 1991 for the predecessor to the Feed-in law in Germany, the Act on the Sale of Electricity to the Grid, to enter into force. In 2000, the Act on Renewable Energy with the feed-in tariff and priority access for renewable energy, as well as the Renewable Energy surcharge, were introduced. This Act (with amendments since then) gave renewables priority access to the grid. Yet, it is fair to say that it had no tangible effect on the natural gas trade from Russia.

To summarize, the first thirty years were shaped by corresponding political and economic interest, growing and stable gas demand, balanced interdependence and technology cooperation beneficial to both sides.

4. Tipping the balance: The EU as an intervening factor (2000–2013)

In the 2000s there was a noticeable shift from the notion of interdependence to asymmetrical dependence. Moreover, the once common “infrastructured” and contractual “spaces” (Yafimava, 2011) became fragmented. The fragmentation had become evident in the 1990s with the newly independent transit countries Ukraine and Belarus. This resulted, in particular, in the Russian–Ukrainian gas/transit disputes in 2006 and 2009 and trickled down into the EU’s policies.

Moreover, since the 2000s, the EU became the determining factor for German–Russian gas relations, because (a) the Internal Energy Market Packages of 1998, 2003, 2009 fundamentally changed the market and the business models of all natural gas undertakings, (b) with enlargement the EU developed a more critical view of Russia as a gas supplier, and (c) (external) energy policies increasingly became a matter of contested political authority in the EU and among Member States. In addition, there were global gas market developments which turned the producers’ market of the first decade of the 21st century into a buyers’ market with the shale revolution in the U.S. and the subsequent liquefied natural gas (LNG) glut on global markets in the second decade.

In this period, Germany’s approach to energy policies in the EU became more climate-driven. During its Presidency of the EU Council, in 2007, Germany pushed for an integrated energy and climate approach. The strategic triangle of energy policy, including supply security, climate mitigation and competitiveness, became the major point of reference in the EU.

Towards Russia an additional leitmotif became “modernization,” succeeding the old idea of “rapprochement through interdependence.” The German–Russian Modernization Partnership of 2008 (the EU inaugurated a Modernization Partnership in 2009) was the first to include energy efficiency and technology cooperation directed to energy transformation. However, this approach to tech-

nology cooperation was not well received in Russia and led to considerable disappointment in the EU. The idealistic approach had a hard landing in reality. As became evident in the 2000s, Russia's trajectory did not—as hoped for—result in a gradual adoption of European norms, but Russia rather expanded state capitalism, oligopolistic structures and increasingly emphasized national sovereignty over natural resources. Overall, it further contributed to the above described alienation in the relationship.

With the Internal Energy Market Packages, the EU Commission has become the major agent of change. It was the Treaty of the Functioning of the European Union (Lisbon Treaty) and the Third Energy Package of 2009, which caused a sea change in the German–Russian relationship, but also between the EU and Russia. Moreover, the internal market rules defined the respective radius of action enjoyed by Brussels and the member states, and the authority over certain issues has become more contested. Until the ratification of the Lisbon Treaty in 2009, the EU had no juridical status and no real competences allowing institutions to become significantly involved in this area. Since then, energy policy falls under shared competence (Article 194 of the Treaty of the Functioning of the European Union). While EU member states possess national sovereignty over their energy mix, the Union establishes norms designed to ensure a functioning energy market and security of supply through the legislative procedure. Important issues require approval or notification from Brussels, as underlined in the Third Energy Package.

The Third Energy Market Package has affected Gazprom's corporate strategy and business model (Romanova, 2016, p. 863). The EU's regulatory course was heavily criticized by Russia for unilaterally changing the rules. As a result of the EU's changing assessment of the geopolitical and the gas market situation, the regulatory framework was subjected to a number of changes; in most cases, these adjustments were directed to Russia. As a consequence, Russia and the EU were on a confrontation course regarding sensitive matters even before the crisis over Ukraine (Lohmann, 2014, p. 6).

The Third Energy Market Package rapidly changed the markets, because the shale gas revolution and the subsequent expansion of LNG trade resulted in a gas glut. This not only changed the supply and demand balance in Europe, turning the EU market into a buyers' market, but the large additional LNG volumes available on the spot markets accelerated competition in the EU market. In particular, the unbundling changed the structures profoundly. This had an impact on German gas companies, because their bundled business model of importing, transmitting, and merchandising gas had become unstable and partly obsolete (Stern and Rogers, 2014, p. 75). The large vertically integrated companies of the past, which were deeply entrenched within the German corporate governance-system (Andres et al., 2011; Lohmann, 2006; Westphal, 2019), vanished. Their privatization and subsequent de-monopolization and unbundling in line with EU regulation resulted in a multitude, variety and diversity of actors in the German gas market. With regard to the power balance, the shake-up was manifold: Germany had to share competences with Brussels and formulate energy policies on a consensual basis. Moreover, the German method of implementing the Internal Energy Packages has resulted in the state retreating into regulatory matters. Hence, the German state no longer has shares

and a direct influence in companies, but provides the framework for the functioning of the market.

For the German–Russian gas relationship, this meant no less than a weakening of the political dimension. Most importantly, and as a result of the legal framework in Germany, gas imports from Russia have reflected the economic and commercial decisions of private companies since then. Germany has relied on competitive market mechanisms for its security of supply and perceived the historical relationship and proximity to Russia as an asset.

In sum, the “alliance” melted down to the companies’ level, with the firm rhetorical support of Germany. The balance of power was shaken up when commercial and business relations were unbundled. Structurally, the EU has unilaterally changed the regulatory framework, inducing more short-term elements. The outcome increased institutional mismatches at the regulatory, contractual, and commercial levels. This, in tandem with the gas glut, diminished Russia’s negotiating power and turned the market into a buyers’ market. One obvious rupture was the increasingly diverging time frames: Whereas Gazprom still required a long-term perspective, German importers became short-term oriented in order to frequently adapt their portfolios to changing market situations. This increasingly overshadowed the German–Russian gas relationship and its underlying patterns of reciprocity and interdependence.

At the same time, Germany’s approach towards Russian gas supplies, which was guided by the liberal market paradigm, has faced harsh criticism in the EU since its Eastern Enlargement, reinforced by Russian-Ukrainian gas disputes. The EU underwent a complete paradigm shift and sent out very ambiguous messages in the first decade of the 2000s. In 2000, with the launch of EU-Russia dialogue, the then president of the EU Commission, Romano Prodi had announced plans to double imports from Russia (Westphal, 2007, p. 98). Yet the subsequent enlargement towards the East changed the perception of Russia as an energy supplier, triggering scepticism regarding Russia’s reliability, and highlighting the instrumentalization of gas as a foreign policy tool. The less consensus there was in the EU regarding energy policies and policies towards Russia, the more political authority inside the EU was contested.

Last but not least, Gazprom’s new pipeline projects became a bone of contention as well as Gazprom’s dominant market position and price policies in Eastern and Central Europe (see Bros et al., 2017; Westphal, 2014). When the gas glut was in full swing, Nord Stream 1’s first pipeline was completed in June 2011 and the second strand in April 2012. The new situation of the Third Energy Package in place resulted in quarrels around the onshore pipeline connections. Moreover, volumes sent through Ukraine decreased after the construction of Nord Stream 1, whereas the transit volumes through Yamal were unaffected, making it a beacon for Nord Stream 2.

To summarize, during this period 2010–2013 the EU’s approach to Russia was dominated by the need to break up Gazprom’s market dominance and demand reciprocity in market liberalization; this also set the framework for German policies. This was designed to bring gas prices down in Eastern Europe, but also to eat into Gazprom’s rents. Germany’s approach became increasingly driven by climate policies. Taken together, the three objectives of the energy triangle appeared to carry equal weight during this period.

5. Germany's *Energiewende* and EU's securitization: Gas as an energy source "by default"

As outlined above, transition and regulatory changes carry far-reaching risks, in particular in times of geopolitical tensions. Structural changes in the relationship have resulted in growing misperceptions, misunderstandings, and increasing levels of mistrust.

Uncertainty and unpredictability over the future of the EU-Russian gas relationship stretched over into Russia's gas relations with Germany. The *Energiewende*³ and the integrated climate and energy policies of the EU have contributed to a shake-up in the relationship. Climate and energy policies have turned demand prospects upside down: from the prospect of growing demand (that had driven the long-term relationship since the beginning) to uncertainty and unpredictability.

German energy policy has been directed to an *Energiewende* since 2011. The realization of the *Energiewende* has become a major political project, and the Energy Concept of September 2010 (Bundesregierung, 2010) laid the basis for this policy. It aimed at achieving greenhouse gas (GHG) emissions' reductions of 40% by 2020, 55% by 2040, and 80–95% by 2050 (all against 1990 levels). The 2010 concept had two core policy objectives: to increase the share of renewable energy and to improve energy efficiency.⁴ Of significance for natural gas and its role in the *Energiewende* is that the Energy Concept did not explicitly mention the role of natural gas (as a bridge or destination fuel), but rather mentioned it with regard to thermal power generation in one line with coal.

The strong focus on electricity and renewable power generation was also illustrated by the fact that the revised Energy Concept of 2011 got back on track with the nuclear phase out, which had been agreed in 2000 by the Social Democratic Party (SPD)/Green government, which had set a 32-year time limit on the country's nuclear power plants. The predominant focus on an "Electricity Wende" (or more precisely a transition in power generation) was balanced five years later. In November 2016, the Federal Ministry for the Environment issued a Climate Action Plan for a climate-neutral Germany by 2050. Electrification of all sectors and sector-coupling were formulated as the key objectives (Bundesregierung, 2016). Only slowly, the transition in transport and traffic as well as in heating were included. As a matter of fact, the impact of the *Energiewende* is very difficult to grasp.

The German–Russian relationship became characterized by increasing instability and the lack of a long-term vision. This has both political and structural reasons. On the one hand, the German *Energiewende* of 2011, backed by the Paris Agreement on Climate Change in 2015, questions the use of fossil fuels in the long term anyway. The position of natural gas in the *Energiewende* was not formulated, despite the fact that it is the "cleanest" fossil fuel and could serve as a bridge to decarbonization. Natural gas appeared as an energy source "by default"—not

³ The Energy Concept of 2011 laid the basis for the *Energiewende*. It has three pillars: the nuclear phase-out, expansion of renewables, and energy efficiency. There is also a long-term energy and climate strategy, which started in the 1990s. It requires structural changes in the German energy sector by facilitating a transformation of the power sector and moving progressively toward renewable energy and a low-carbon economy. It should not be confused with the *Atomausstieg*.

⁴ For more details on *Energiewende* goals see <https://www.bmwi.de/Redaktion/EN/Artikel/Energy/target-architecture.html>

by design—in the German and EU energy mix. To put it succinctly: Natural gas relations were deprived of having long-term prospects because the level of demand no longer seemed predictable.

While Germany's approach to gas became driven by short-term considerations and by "default," Russia continued a systemic need for long-term prospects because of high upfront investment costs in exploration, production, and infrastructure. The role of gas in Germany was not explicitly debated as the *Energiewende* strategy centered on sector-coupling and electrification (Bundesregierung, 2016). In policies, gas remained a blind spot; in the commercial world, however, companies made their bet on (Russian) gas as a quick choice to decarbonize. The most visible sign of this approach is the support of Uniper and Wintershall (later WintershallIDEA) for Nord Stream 2.

The disconnect between policy and political rhetoric on the one hand, and the market, energy consumption and CO₂ emissions, on the other hand, has become more tangible since then. As a consequence of raised climate ambitions, the gap between target scenarios and best guess scenarios became ever more visible. The German government also started to face the *Energiewende* dilemma of steering an energy transition while letting market forces work. Natural gas consumption in Germany, in particular in the power sector, has been squeezed between the expansion of renewables and coal. The combination of weak carbon prices and relatively high gas prices (compared to coal) until mid-2017 in Europe led to a decline in the competitiveness of existing gas-fired plants—some of them having been taken offline. The use of coal versus natural gas-fired power generation was a function of relative price developments (Appunn et al., 2017). Since mid-2017 the gap between coal- and gas-margins has closed and the price slump of natural gas prices in 2019 has given gas-fired power plants a competitive edge over coal. Nevertheless, the Paris Agreement of 2015, the ambitions to keep global warming well below 2 degrees centigrade compared to pre-industrial levels and the efforts to limit it if possible to 1.5 degrees deprive natural gas (without CCS) of a long-term perspective.

While the economic fundamentals slowly have changed in favor of gas, regulatory uncertainty continued to threaten Gazprom's business calculations. While regulatory change had been largely driven in the past by market liberalization, this changed fundamentally after 2014. Inside the EU, geopolitics have determined the approach to Russian energy since the crises in Ukraine and hostilities over it. The creation of the Energy Union was driven by these developments and directed towards energy security and diversification away from Russia. In February 2015, President of the European Commission Jean-Claude Juncker launched the concept with the communication "Energy union package. A framework strategy for a resilient energy union with a forward looking climate policy" (EC, 2015). The substantial differences with the initial concept by Donald Tusk (Tusk, 2014; Szulecki et al., 2016) were decisive: five dimensions were fleshed out in the package by integrating the energy objectives of all EU-28 member states. Energy security, solidarity and trust are ranked most important followed by fully integrating an internal energy market, improving energy efficiency, decarbonizing the economy (not least by using more renewable energy), and supporting research, innovation and competitiveness. This comprehensive approach was also backed by Germany. Yet, it was a logical step that the EU Commission

looked into taking a stronger political role toward creating the Energy Union. The perception of the “weaponization of gas,” which identifies the threat of natural gas deliveries as a tool to promote foreign policy interests, gained ground in the aftermath of the 2014 crisis, especially in Eastern Europe (Bryza, 2014). The German government’s emphasis remained on the pillars regarding functioning markets, expansion of renewables, decarbonization and energy efficiency, but has become more defensive ever since.

The Nord Stream 2 pipeline, initiated in 2015, emerged as the most contentious issue in EU natural gas policies and revealed how contested authority became inside the EU (Goldthau and Sitter, 2020) and how narrow the consensus on energy policy is (Lang and Westphal, 2016). As a result, Berlin’s room for maneuver has been further limited by the new amendments to the gas directive (Directive (EU) 2019/692) in April 2019,⁵ and more competences have been pooled in Brussels. As a matter of fact, regulation became a tool of hard economics and geopolitics, rather than a tool for market liberalization (Goldthau and Sitter, 2020).

For the conduct of the German–Russian gas relationship this meant that the number of intervening factors has increased substantially, making the overall course more volatile and unpredictable. A major factor has been the sanctions imposed, and especially the U.S. sanctions under the Trump Administration. The main fundamentals of the past have been shredded into bits and pieces, e.g. in the commercial relationship. The political alienation between Russia and Germany/EU results in the fact that a balance of power is no longer an objective, but rather the aim is to exploit power asymmetries to one’s own end. The German political elite is somewhere left in between, but certainly deprived of major tools and instruments as competences have shifted either to Brussels or are left to regulatory authorities. Given that gas imports from Russia have reached record levels in 2017 and 2018 (Fig. 1 and Fig. 2), the political disconnect from market realities means a challenge for Berlin, both in terms of foreign but also climate policies.

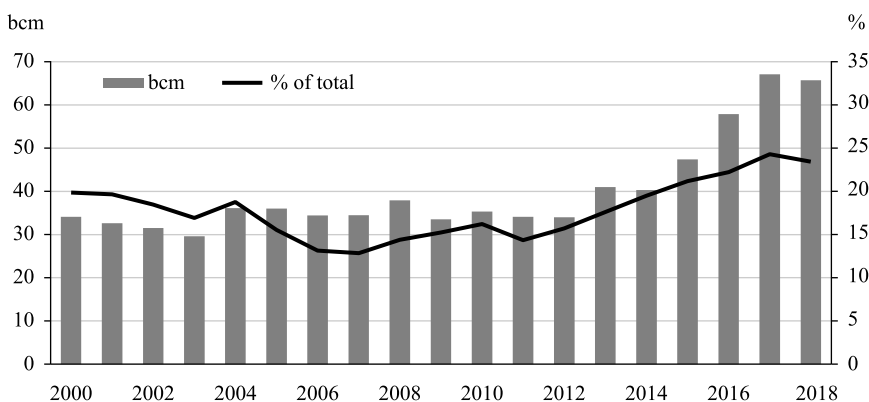


Fig. 2. Russian gas export to Germany, 2000–2018.

Source: Gazprom.

⁵ Directive (EU) 2019/692 of the European Parliament and of the Council of 17 April 2019 amending Directive 2009/73/EC concerning common rules for the internal market in natural gas (Text with EEA relevance.) <https://eur-lex.europa.eu/eli/dir/2019/692/oj>

Taking the “securitization” and the decarbonization efforts together, the implications for Russia and Gazprom are far-reaching, touching upon the Russian understanding of energy security as security of demand.

In Russia, the predominant view has been that energy security should not be treated as a purely economic issue (Romanova, 2016), and of course, sovereignty over natural resources and the maximization of rents has been an important issue. Yet the shift is more profound; security/political stakes have been weighed as being as important as economic ones. This was visible in the Energy Security Doctrine of May 2019, which defined international regulatory and legal changes as a special challenge for Russian energy security (Point 8d). Moreover, whereas Russia endorses the UN sustainable development goals and has submitted its voluntary SGG report in summer 2020, the reinforced efforts to fight climate change and the accelerated transition to a green economy are seen as a foreign policy challenge to Russian energy security (Point 9). This is putting Russia and Germany at odds.

In the 2000s, Russia’s role as a major energy supplier was perceived and used to regain international power and reposition itself in the world as an “energy superpower.” The relationship between Germany/EU energy supplies helped to maintain an eye-to-eye relationship. On the one hand, it made Russia even more dependent on the development and evolution of EU laws. On the other hand, when energy markets turned into sellers’ markets after 2003, Russia increasingly resisted a rapprochement with the EU (Bros et al., 2017). When the negotiations for a new EU–Russia Partnership and Cooperation Agreement failed in 2007, this proved to be a watershed, as Russia resisted complying with external rules as defined by the EU. The EU’s regulation hit a key sector in Russia, not that much for the budget, but even more so as backbone for the economy and social inclusion. Any weakening is a threat to the long-term prospects of the Russian economy as well as the Russian political system.

To summarize, the German–Russian gas relationship has been scrutinized in terms of vulnerabilities and potential political instrumentalization from both sides. As a consequence, the positive notion of mutual interdependence has been questioned.

6. Germany’s re-discovery of gas policies: From “default” to “design”?

The conclusion hitherto is that there is an uncertain future for the Russian-German gas relationship. The once solid interdependence of the first 30 years has been shattered and scattered in the first decades of the 2000s. The spirit of an alliance as a ‘strategic partnership’ is lost at the political level and has survived in part only in companies. There is no power balance in the sense of a political will and explicit political approach left, certainly not in the EU, also less in Germany, given the deteriorating security situation. The relationship is analyzed under asymmetrical dependencies and vulnerabilities.

The political framing has become more securitized also in Germany, as well as more climate-driven. Traditional German–Russian gas relations with the reference to 50 years of reliable gas supplies⁶ is questioned from two sides: supply security and climate protection. In this vein, Russian gas supplies are seen (a) as

⁶ <https://www.oaev.de/de/trotz-gegenwind-eine-historische-energiepartnerschaft>

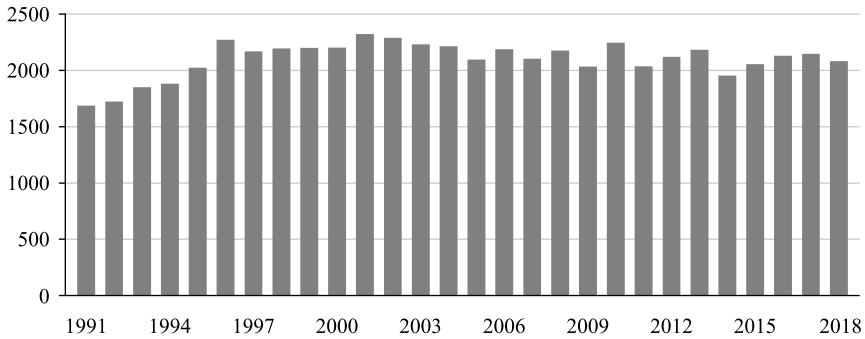


Fig. 3. Germany final consumption of natural gas, 1991–2018.

Sources: BAFA; BMWi; AGEB; Destatis.

being antagonistic to a carbon-neutral energy system and (b) as divisive inside the EU with Nord Stream 2 as the linchpin. Even at the minimal contractual quantities (“take or pay” volumes), they guarantee nearly 40 bcm per annum of Russian gas exports to Germany beyond 2030.

German final gas consumption has slightly decreased compared to 2000 and to 2010, after the “lost decade” of gas consumption in Europe (Fig. 3). Thus, it is very difficult to analyze the impact of the *Energiewende* from these statistics.

Yet, 2019 emerged as the year in which gas policies in Germany were “re-invented” through the back door of the “coal exit” until 2038 which was negotiated in 2018/2019 and translated into law in 2020. Moreover, in December 2019, Germany’s Law on Climate Protection was adopted (Bundesregierung, 2019). Moreover, the understanding that the *Energiewende* does include a transformation of the heating and the transport sector has slowly paved the way for the understanding that an all-electric world is not feasible and thus led to a “Gas 2030” Dialogue (BMWi, 2019) in 2019. The Gas Dialogue kicked off the debate on a national hydrogen strategy.

To conclude, the understanding is that there is a growing need for natural gas in the short-to-midterm: electrification and sector-coupling will drive electricity demand. At the same time the six remaining nuclear power plants with 8.5 GW capacity will be shut down until 2020 as well as lignite-fired power plants with a capacity of 15 GW, plus another eight GW of lignite fired power plants until 2030. Given the slowing down of onshore wind and PV installations more natural gas will be needed in the power sector.

The main repercussion of the Corona Pandemic, which unfolded in March 2020 in Germany, has been falling gas prices. Moreover, the recovery program of June 2020 puts an emphasis on (green) hydrogen, earmarks €7 billion for the installation of electrolyzers and a green hydrogen value chain in Germany plus €2 billion for foreign partnerships.⁷ These figures were also included in the national hydrogen strategy which was approved on 10 June 2020 (Bundesregierung, 2020). The strategy mentions blue hydrogen, and assumes that a global hydrogen market will develop. Germany’s emphasis, however, is on green hydrogen.

⁷ Bundesministerium der Finanzen. Das Konjunkturpaket. <https://www.bundesfinanzministerium.de/Web/DE/Themen/Schlaglichter/Konjunkturpaket/Konjunkturprogramm-fuer-alle/zusammen-durch-starten.html>

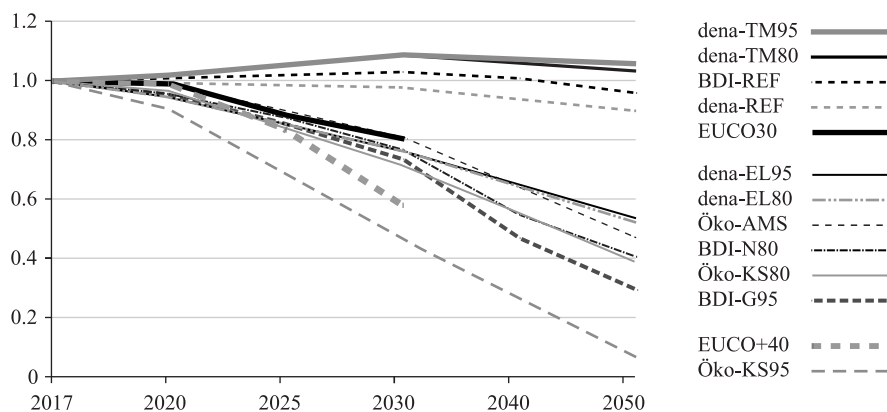


Fig. 4. Development of gas demand in various scenarios until 2050 (index, 2017 = 1).

Source: FNB Gas (2019, p. 45).

7. Conclusions

It is very early at the time of writing to judge the outcome on gas demand (Fig. 4), but also the results of the political debates, in particular for gas imports from Russia. The “geopolitical burden” on natural gas remains a heavy-weight in the EU, but also increasingly in the German elite. The poisoning of Alexei Nawalny in September 2020 could most likely mean a caesura. Moreover, there is “the carbon burden,” too.

In theory, there are many ways to gradually decarbonize gas and a new partnership could be built around such an approach, stretching from reducing methane emissions and flaring over to the production of hydrogen, from natural gas (in steam methane reforming process), by pyrolysis (turquoise hydrogen) and by producing green hydrogen from the vast renewable energy sources in Russia.

The outlook is sketchy at best. Russia’s natural resource endowment in such close proximity to the EU is no longer seen without bias as an asset to the EU or Germany. The EU lacks a consensus, certainly with regard to Russia. The “securitization” paradigm will infringe on developing a stable common framework and dialogue that is deemed necessary to decarbonize German–Russian gas relations and to e.g. trade hydrogen in the future. This will also have to include the transit countries Ukraine and Belarus. But also Russia’s approach is driven by “securitization”: regulatory changes and the fight against climate change are seen as a major foreign policy challenge in the Russian energy doctrine of May 2019.⁸ Yet, the energy strategy of the Russian Federation of June 2020 explicitly mentions hydrogen in a separate chapter and sets the goal to export 0.2 million tons in 2024 and 2 million tons in 2035.⁹ A Russian Roadmap for Hydrogen is in preparation. The major destination, however, might be Japan and Asia.

⁸ Executive Order of the President of the Russian Federation No. 216 of May 13, 2019, “On approval of the Energy Security Doctrine of the Russian Federation”. <http://kremlin.ru/acts/bank/44252> [in Russian].

⁹ Order of the Government of the Russian Federation No. 1523-p of June 9, 2020, “Energy Strategy of the Russian Federation until 2035”. <http://static.government.ru/media/files/w4sigFOiDjGVDYT4IgsApssm6mZRb7wx.pdf> [in Russian].

In the EU, decarbonizing gas as part of the Green Deal and the Green Recovery Programme will be at least an implicit piece of the parcel. This will come with regulatory changes and at the time of writing there is no certainty about the different forms of hydrogen and certain paths to “green/clean hydrogen“. In other words: regulatory change will remain a challenge. Even more important is that the storylines are drifting apart in Berlin/Brussels and Moscow on the other side. A remaining building block could be on technology, innovation and sustainable development, but the outlook for that is very uncertain, given the predominance of securitization on both sides and the strong climate paradigm in Germany and the EU. This altogether will make natural gas imports from Russia a matter of “default“. The analysis of the past twenty years has shown that transition and change result in misperceptions and misunderstandings. This gives credence to the assessment that the energy transition will create disputes and conflicts in importer-exporter relationships. The shale revolution, the subsequent gas glut and the Corona Pandemic with its dual shock of demand reduction and LNG market oversupply for longer in that regard have had a proleptic effect on Russia and the German–Russian gas relationship. Whether the decarbonization of the gas value chain will continue will most likely depend on the overall political relationship between Germany/EU and Russia.

Acknowledgements

This article, completed in July 2020, is a product of the project “Is this Russia’s Kodak moment?” which is financed by the NORRUSS program of the Research Council of Norway. I am grateful to Indra Overland and an anonymous reviewer for their suggestions and comments. I remain, of course, responsible for the content of the paper.

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