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Economic Problems

A Paradigm Change in Energy Cooperation between Germany and Russia

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Abstract—Germany's transition to a climate-neutral economy, the main parameters of which were determined by the European Green Exchange Rate (December 2019) and clarified in the updated Law on Climate Protection of Germany (June 2021) and the EU Fit-for-55 program (July 2021), leads to the abandonment of the use of primary energy sources, including their importation from Russia. The energy transformation of the German market economy presumed a gradual restructuring of the existing model of German–Russian cooperation in the energy sector, including its transfer to priority cooperation in the field of energy efficiency and renewable energy sources. Brussels and Berlin responded to the special military operation of the Russian Federation on the territory of Ukraine with large-scale economic and political sanctions, which included significant restrictions on the import of Russian coal and oil. At the same time, the German federal authorities outlined the necessity to abandon Russian pipeline gas and petroleum products, as well as the deprivation of ownership of the two main players from the Russian Federation in the German oil and gas market—Gazprom and Rosneft. Their German partners have frozen participation in Russian projects. At the end of February, the certification of the Nord Stream-2 offshore gas pipeline was stopped. Interdepartmental state interaction and scientific and technical cooperation in the energy sector have been terminated. These events indicated the readiness of the government coalition in the short term to replace the previous model of energy cooperation, which has performed well for half a century, and to move to independence from Russian fossil resources and their derivatives. The author analyzes the reasons and content of the current measures taken by Berlin, as well as their medium- and long-term consequences for German–Russian cooperation.

Keywords: Germany, European Union, EU, Russia, European Green Deal, energy transition, transformation, German–Russian cooperation

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ENERGY DEVELOPMENT: THE BASIS OF GERMAN–RUSSIAN ECONOMIC COOPERATION

The modern model of German–Russian energy cooperation began to take shape more than half a century ago, when in May 1969 the Minister of Foreign Affairs of the USSR A.A. Gromyko proposed to the leadership of the FRG, in the conditions of bans on the purchase of West German large-diameter pipes that had been in force since the early 1960s, a new model of economic and political interaction: to supply these products, as well as the equipment necessary for the construction of a modern gas pipeline in exchange for future supplies of Soviet natural gas[1]. On February 1, 1970, the Soviet Union and West Germany in Essen concluded the "deal of the century" on the terms proposed by the Soviet side. It was based on a grandiose barter, the exchange of three billion cubic meters of gas for pipes. Already in May 1973, gas supplies began moving through the main gas pipeline to the GDR (the recipient was Verbundnetz Gas, VBG), and in October to the Federal Republic of Germany (the counterparty was the Ruhrgas concern). In 1972, 1974, 1979, the Soviet–West German "deal of the century" was supplemented by agreements to increase the volumes supplied. In November 1981, within its framework, the largest contract was signed, providing for the construction of two gas pipelines and the supply of 40 billion cubic meters of gas, of which 10 to 12 billion were destined for West Germany. Due to opposition from the US administration, in the end, only one line was built (Grivach and Simonov, 2019; Afanas'yeva, 2021a, 2021b).

In 1974, an agreement was signed on the construction of the Orenburg–Western Border of the USSR gas pipeline with the participation of the GDR and other

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[1] "40 years on the German market." https://www.gazprom.ru/about/history/events/germany40/. Cited April 20, 2022.

CMEA countries, which began operating in November 1980. In 1986, an agreement between the USSR and the GDR on cooperation came into force during the development of the Yamburgskoye field, within which the East German Verbundnetz Gas received Soviet gas until 1989 in exchange for the construction of facilities, the supply of equipment and pipes (in particular, for the construction of the Yamburg–Western Border of the USSR main gas pipeline).

After the unification of the two German states, Gazprom and its second main German partner (along with Ruhrgas) Wintershall (a subsidiary of BASF) in November 1990 created the first joint venture, WIEH, which became involved in the transportation, storage, marketing, and trade of gas in Germany and other European countries. In 1993, the partners completed the construction of the STEGAL and MIDAL gas pipelines in Germany with a total length of more than one thousand kilometers, which gave the Russian concern direct access to the German gas market for more efficient operation. The second joint venture, WINGAS, was established. Gazprom signed long-term gas contracts with both JVs. In 1998, the WEDAL gas pipeline was built. At the end of the same year, the Russian concern agreed with Ruhrgas to extend most of the long-term contracts until 2020. In December 1998, the German partner acquired a 2.5% stake in Gazprom for 660 million dollars at an auction.[2] Built in 1999, JAGAL connected the STEGAL and Yamal–Europe gas pipelines.

In 1999, JV WINGAS brought Reden, the largest underground gas storage facility (UGS) in Germany and Western Europe, to full capacity. In 2009, Gazprom and VNG established a consortium for the construction of the Katarina UGS facility, which began in Saxony-Anhalt in 2011. Its phased expansion was planned until 2025. In 2013, together with BP Europe SE and Dong Energy, Gazprom Germania commissioned the Etzel gas storage cavern located in Lower Saxony. In the same year, the Yemgum UGS, built by WINGAS and VNG, began to operate.

The agreements between Gazprom and German partners on the exchange of production and marketing assets became a breakthrough in energy cooperation. In 2006, BASF (Wintershall) received 25% minus one share in Severneftegazprom OJSC, which is developing the Yuzhnorusskoye oil and gas field. The deal was the first joint project with a foreign partner to create a complete chain from gas production to its end consumer. In 2008, the right to coparticipate in production at this field was also acquired by E.ON. In 2012, Wintershall took ownership of two hard-to-reach areas of the Achimov deposits of the Urengoyskoye field (in 2003, a JV Achimgaz CJSC was established with it to develop one of them). In May 2019, LetterOne, owned by Russian citizen M. Friedman, which owned the German DEA Deutsche Erdöl AG, created a joint venture Wintershall Dea with this subsidiary of BASF. The Russian share was 33%, then it was reduced to 27.3%. As of early 2022, the JV was also involved in the development of the third section of the Achimov deposits.

In parallel, Gazprom developed a partnership with Siemens, as well as scientific and technical cooperation with its main German gas partners. The relevant agreement was signed with E.ON Ruhrgas AG in 2006, and with Verbundnetz Gas in 2013.

In 2011–2012 the unique international offshore gas pipeline Nord Stream-1 was launched with a capacity of 55 billion cubic meters (participation interests: Gazprom, 51%; Wintershall and E.ON Ruhrgas AG, 15.5% each) from land branches of NEL and OPAL. In autumn 2021, the Russian concern completed construction of Nord Stream-2,[3] both lines of which (with a similar power) were completely ready for technical operation and certification (Shagina and Westphal, 2021). On the eve of the end of this project, Germany in 2019 acted as an intermediary in concluding a five-year agreement between the Russian Federation and Ukraine on the transit of a total of 220 billion cubic meters of Russian gas in the period from 2020 to 2024 (with a guaranteed payment, regardless of whether this volume is delivered or not).

Thanks to long-term contractual relations between German and Russian partners established over several decades and a reliable infrastructure for the supply, storage, and sale of gas, Germany for half a century was guaranteed to receive the volumes of pipeline gas necessary for its industries and households from the Russian Federation, which has never violated its obligations. According to the German government, until 2022, half of the volumes of Russian gas came to Germany through the Nord Stream-1 gas pipelines (the entry point to German territory in the city of Lubmin) and Yamal–Europe (the city of Malnov), half through the Ukrainian GTS (Widhaus)[4].

As of March 2022, Gazprom Export LLC and its subsidiary Gazprom Germania were responsible for export deliveries. It sold gas to end consumers, most of whom had long-term contracts with Gazprom (until 2030–2035). First of all, these are energy companies Uniper[5] and EnBW (through its subsidiary Verbundnetz Gas). An important role belonged to the wholly

[2] Subsequently, Ruhrgas increased its stake in Gazprom to 6.5%. During the years 2002–2003, it became part of the German concern E.ON. In 2004, the subsidiary was renamed E.ON Ruhrgas. In 2013, it became the property of E.ON Global Commodities SE, which, in turn, became part of the Uniper SE concern established in 2016.

[3] Additionally, its onshore section was built, the EUGAL gas pipeline.

[4] Gasversorgung: Abhängigkeiten verringern. https://www.bundesregierung.de/breg-de/themen/gasversorgung-abhaengigkeiten-verringern-441270?view=rendernewsletterhtml. Cited April 24, 2022.

[5] A subsidiary of Uniper, Unipro PJSC (until June 2016, E.ON Russia JSC, registered on March 4, 2005, in Surgut), owns five thermal power plants in the Russian Federation.

owned subsidiary of the Russian concern, WINGAS, as the central sales structure responsible (like other German partners of Gazprom) for gas supplies to cities, large industrial consumers, and regional gas supply companies. The big player was RWE, which has a contract until 2023.[6]

Since the 1990s, Germany has been developing cooperation with Russia in the field of energy efficiency, energy conservation, and renewable energy sources. In 2006, the German–Russian Raw Materials Forum was created for this purpose. Since 2020, hydrogen energy has become one of the most important areas of cooperation.

The Rosneft State Concern at the beginning of the 21st century acquired participation in the capital of three oil refineries in Germany: these are Raffinerie GmbH in Schwedt an der Oder (54.17% share in the capital, and in capacities, 6.3 million tons per year), which receives oil through the Druzhba pipeline, built in parallel with the gas "deal of the century" in the 1970s with the support of the GDR; Germany's largest refinery MiRO GmbH & Co. KG in Karlsruhe (24% and 3.6 million tons) and BAYERNOIL Raffineriegesellschaft mbH in Neustadt an der Donau (28.57% and 2.9 million tons).[7]

In the context of a gradual reduction in unprofitable coal mining in Germany in the zero years (it was finally terminated at the end of 2018), while maintaining it as a fuel for thermal power plants and raw materials for the metallurgical industry, its imports increased significantly, including from Russia. Deliveries came mainly from Kuzbass and Krasnoyarsk krai, the companies from which, at the expense of foreign exchange earnings, modernized mining facilities and equipment, including purchases from German companies. The share of the Russian Federation in the total German imports of this resource in 2021 amounted to 56.6% (18.3 million tons); the share of the United States, 15.5% (5.0 million tons); Australia, 16.1% (5.2 million tons); Colombia, 5.5% (1.8 million tons).[8]

According to the Federal Office for Economics and Export Control (BAFA), the peak year for Russian gas supplies was 2018, when the volume of its imports amounted to 54.7 billion cubic meters (see Table 1). After its decrease in 2019–2020, deliveries increased again to 50.0 billion tons. In the period from 1973 to 2013, about one trillion cubic meters were supplied to Germany, and from 2014 to 2021, 372 billion.[9] Thus, the volume of gas imports from the Russian Federation over the past eight years has exceeded one-third of all supplies over the previous forty-year period. According to various estimates by German experts, Russia accounted for 50 to 55% of all imported gas at the beginning of 2022 (Holz et al., 2022; Fischer and Küpel, 2022; Wie sich russisches Erdgas..., 2022),[10] and the main competitors were Norway (about 30%[11]) and the Netherlands (from 13[12] to 21%).[13]

In 2021, Germany imported 27.7 million tons of oil from the Russian Federation, which accounted for about a third of its total imports. Other major suppliers were the United States (12%), Kazakhstan and Norway (10% each), as well as Britain (9%) (Just, 2022).

In Germany, in 2021, oil, gas, and coal accounted for 68% of primary energy consumption (32, 27, and 9%, respectively).

ENERGY TRANSFORMATION OF THE GERMAN MARKET ECONOMY

The general direction of reforming the German energy sector was set at the beginning of the 2000s by the government under the leadership of Chancellor G. Schroeder. The Social Democrats and the "greens" proclaimed a course towards an environmentally friendly industrial policy and passed laws on the abandonment of nuclear energy and on the development of renewable energy sources (RES). The reforms were continued by the following coalitions of A. Merkel. Germany has become the founder and main protagonist of a unified climate and energy policy built on the transformation of RES into the "bearing pillar of a sustainable energy system" (Meden, 2015).

The European Green Deal (EGD), approved by Brussels in December 2019, outlined the parameters for the transition of the EU states to a climate-neutral economy. It provides for a significant reduction in the share of primary minerals in energy production, respectively, a gradual rejection of their imports, including from Russia. Germany, the informal economic and political leader of the EU, has become one of the main protagonists of accelerating this process. In June 2020, the National Hydrogen Strategy was

[6] Der Weg des russischen Gases, March 30. https://www.tagesschau.de/wirtschaft/konjunktur/erdgas-russland-deutschland-lieferketten-101.html. Cited April 14, 2022.

[7] Rosneft website. https://www.rosneft.ru/business/Downstream/refining/Neftepererabativayushie_aktivy_v_Germanii/. Cited April 14, 2022.

[8] Calculated according to the Federal Statistical Office. https://www.destatis.de/DE/Themen/Branchen-Unternehmen/Energie/Verwendung/Tabellen/einfuhr-steinkohle-zeitreihe.html. Cited April 30, 2022.

[9] Calculated based on BAFA data. https://www.bafa.de/SharedDocs/Downloads/DE/Energie/egas_entwicklung_1991.xlsm;jsessionid=CBC7C83877BB94D7C3FD0BA43169A5F4.2_cid371?__blob=publicationFile). Cited May 10, 2022.

[10] Apparently, it is referred to physical volumes. In terajoules, the share of the Russian Federation at the beginning of 2022 was 37%.

[11] L. Gries, Wer könnte Russlands Lücke füllen?, Tagesschau, January 21. https://www.tagesschau.de/wirtschaft/verbraucher/gas-russland-luecke-101.htm. Cited April 14, 2022.

[12] Ibidem.

[13] A.-C. Beck, Der Weg des russischen Gases, Tagesschau, March 30. https://www.tagesschau.de/wirtschaft/konjunktur/erdgas-russland-deutschland-lieferketten-101.html. Cited April 14, 2022.

Table 1. Import of oil, gas, and coal by Germany from the Russian Federation from 2014 to 2021

Year	Oil		Gas		Coal	
	tons	thousand euro	thousand cub. m*	thousand euro	tons	thousand euro
2014	30025.655	15702.239	37599.000	9514.953	12616.681	931.833
2015	32577.031	10790.561	40041.189	8317.464	14392.932	992.724
2016	36047.803	9800.990	45146.865	7290.053	15927.293	1005.712
2017	33511.768	11553.715	52003.622	8952.246	16323.103	1452.267
2018	30968.720	13446.999	54682.622	10040.220	17640.868	1663.006
2019	27091.274	11012.159	46942.216	7076.880	15795.233	1257.579
2020	28132.402	7227.165	45866.919	5760.243	12554.604	780.421
2021	27741.322	11407.433	50046.757	8766.123	18339.774	2086.629
Total for the period	246095.975	90941.261	372329.189	65718.182	123590.488	10170.171

* Converted from terajoules, in which BAFA accounts for gas imports. Therefore, there may be slight differences from the actual physical volumes of deliveries.

Source: compiled by the author based on BAFA data published by the German Ministry of Economy and Climate Protection (BMWK). URL: https://www.bmwk.de/Redaktion/DE/Parlamentarische-Anfragen/2022/03/3-37.pdf?__blob=publicationFile&v=6. Cited April 30, 2022.

adopted, the main provisions of which were included in a similar EU strategy (July 2020). In April 2021, the German government developed a draft amendment to the Climate Law, which was approved by both houses of the federal parliament in June. It set a new deadline for Germany to achieve climate neutrality—2045. In July 2021, the European Commission clarified the directions outlined earlier in the EGD by adopting the Fit for 55 package of measures, which Berlin fully supported.

Formed following the results of the September elections to the Bundestag, the German government coalition consisting of the SPD, Union 90/The Greens, and the FDP at the end of 2021 confirmed the course towards boosting energy transformation and creating a carbon-free economy, minimizing the use of oil, natural gas, and coal, and further maximization of the share of renewable energy in the country's energy balance, with the development of electromobility and green hydrogen energy (Sokolov, 2022; Mehr Fortschritt..., 2021).

In 2021, a number of well-known analytical structures analyzed the possibilities for Germany to achieve the climate neutrality goals by 2045. The decrease in the demand of the German economy for gas by 2030, according to the forecast, will range from 6 to 17% (Fischer et al., 2022). The main reason for this slight drop is due to the desire of the old and new government coalition to use natural gas as a guaranteed and relatively environmentally friendly transitional energy source in the conditions of a complete phase out of coal and nuclear fuel. The construction of new gas-fired CHP plants is allowed, but they must be able to be converted to hydrogen in the future and, along with the old fossil fuel plants, ensure the reliability of the expansion of RES, hedging them during periods of adverse weather/peak loads. Under pressure from Berlin, the European Commission in early 2022 classified natural gas as "temporarily sustainable" in its taxonomy. This means that, within the framework of the German energy transition, it will continue to play one of the important roles in the German energy sector.

The main consumers of natural gas, 95% of which is imported by Germany, are industry (about 29% of total consumption), households without district heating (about 29%), trade and small artisans (13%), the energy sector (producers of electricity and heat generation), and oil refineries (28%) (Holz et al., 2022).

Vice-Chancellor and head of the new Ministry of Economics and Climate Protection (BMWK) Robert Habek at the beginning of 2022 repeatedly stated the need to abandon the import of primary minerals from Russia gradually and the government's readiness for the economic costs of such a step (*The stage of a special military...,* 2022). Together with other politicians and experts, he critically assessed Gazprom's policy regarding the filling of its German UGS facilities in fall 2021 and winter 2022, considering it one of the reasons for high spot gas prices and a means of pressure on Berlin to speed up the certification process of Nord Stream-2. He initially considered it a geopolitical project, increasing the dependence of Germany on the Russian Federation, and tried to close it.[14]

[14]On February 22, 2022, the certification process of the Nord Stream-2 was frozen at the initiative of Chancellor O. Scholz. Thus, the project avoided imposition of inevitable sanctions against it by the EU. This kept the possibility to return to the certification procedure in the future without the need to make decisions on lifting restrictions (Belov, 2022a).

Even before the start of the special military operation (SMO) of Russia on the territory of Ukraine, German experts prepared a number of studies (including those made on external orders) regarding the possible consequences for the German economy of a decrease in the supply of Russian energy carriers, primarily gas (see, e.g., Fischer and Küper, 2022). After the start of the SMO, Germany became one of the main protagonists of the consistent introduction of severe restrictive measures against the Russian Federation. Interdepartmental interaction was frozen, including in the energy sector, in particular, hydrogen energy; joint scientific and technical projects were stopped.

Largely thanks to Berlin, the fourth EU sanctions package was adopted as quickly as possible. The Federal Chancellor and his entourage lobbied to hold a meeting of EU heads of state in Versailles on March 10–11, 2022, at which measures were approved to reduce dependence on gas, oil and coal supplies from the Russian Federation gradually. At the same time, O. Scholz opposed the introduction of an embargo on them. Berlin also became one of the initiators of the preparation of the RePowerEU plan, aimed at developing a new energy strategy for the EU. The decisions of the EU summit in Brussels, held on March 24–25, consolidated the course outlined in Versailles for the consistent and, if possible, rapid ridding of the EU countries from energy dependence on Russia (Belov, 2022a; Hemp, 2022; *The stage of military operation...,* 2022).

The German authorities initially took a cautious position regarding the possible negative consequences of restrictions on the import of a number of critical products for the German national economy, primarily energy fossil resources. In March–April 2022, the number of German scientific papers devoted to this topic increased significantly.

Experts warned about the impossibility of abandoning Russian gas in the short term due to the lack of prospects for finding alternative import sources quickly. It was due to limited opportunities to increase supplies by Germany's main pipeline partners, Norway and the Netherlands, as well as the specifics of the international LNG market and its infrastructure in Europe. It was assumed that, in the event of an embargo/cessation of imports, in the short term it would be possible to replace no more than a third of imported Russian gas, including through LNG, increasing capacity utilization of coal-fired CHP plants and reducing gas consumption/savings in all economic sectors (Bähr et al., 2022; Just et al., 2022; Fischer et al., 2022; Holz et al., 2022).

BERLIN'S PLANS TO PROVIDE ENERGY INDEPENDENCE FROM THE RUSSIAN FEDERATION

Taking into account the assessments of the expert community, BMWK has accelerated the preparation of measures for a gradual transition to energy independence from the Russian Federation, which has been worked on since the beginning of February 2022. The first results were published on March 25 in the report "Progress in ensuring energy security" (Fortschrittsbericht Energiesicherheit).[15] The authors reported that Berlin continued to purchase the so-called balancing gas and pumping gas into UGS facilities, allocated 3.2 million barrels of oil from strategic reserves, and, through the KfW state credit institution, signed a memorandum with Gasunie and RWE on the construction of an LNG terminal in Brunsbüttel (capacity of 8 billion cubic meters, readiness in 2026) and instructed Uniper and RWE to arrange the lease of three floating storage and regasification units (FSRU). According to its plans, the abandonment of Russian coal and oil is possible as early as 2022, and gas in 2024. By the end of April, BMWK stated a number of further successes in this direction. The second report published on May 1 with the same title[16] emphasizes the good and regular level of interaction of all interested actors at the level of the EU, the federation, and the states to reduce energy dependence on the Russian Federation. Since the second half of March, gas has been pumped into UGS facilities in Germany, the level of filling of which by the beginning of May amounted to 34.3% (on March 18 it was equal to 24.6%). A government order was made for the lease of another fourth FSRU, and preparations began for a bill to accelerate the creation of an LNG infrastructure (LNG-Beschleunigungsgesetz). In order to further reduce the consumption of oil and gas, additional support is provided for energy saving measures, including the promotion of the accelerated replacement of gas equipment for heating houses with heat pumps.

If at the beginning of spring BMWK opposed Brussels' plans to impose an embargo on the import of coal and oil from the Russian Federation, then by the end of April its head and Vice-Chancellor R. Habek changed his position, believing that Germany as a whole had reliable alternatives to the Russian supplies. Its dependence on coal from the Russian Federation decreased to 8% in the first four months of 2022.[17] It is forbidden to conclude new contracts from April 9, and the existing ones must be completed no later than August 10, 2022. By the beginning of May, only two

[15] Fortschrittsbericht Energiesicherheit, BMWK, Berlin, March 25, 2022.
[16] Zweiter Fortschrittsbericht Energiesicherheit, BMWK, Berlin, May 1, 2022.
[17] Ibidem.

East German refineries in Löhne and Schwedt depended on the supply of Russian oil, the share of which in Germany's oil imports was only 12%. By the end of the summer of 2022, these supplies are also expected to be completely replaced, which will mean oil independence from the Russian Federation.

The share of Russian gas in German gas imports fell to 35% in mid-April.[18] On March 23, the European Commission published a document containing new UGS management rules and providing for a number of measures to fill them up to 80% by November 1, 2022 (Kaveshnikov, 2022). In accordance with this regulation, the German government prepared the Gas Storage Law (Gasspeichergesetz),[19] which was approved by the Bundestag on March 25 and entered into force on April 30, 2022. It provides for the required level of occupancy of gas storage facilities in Germany by October 1 by 80%, by November 1, by 90%. This process is controlled by BMWK, the Federal Network Agency (BNetzA), and Trading Hub Europe GmbH, which manages the unified gas hub of Germany.[20]

At the end of March, the management of Uniper was ready to fulfill long-term contracts with Gazprom, but refused to conclude new ones. A similar position was taken by the EnBW concern (in addition to the contract until 2030, in 2022 it ends a two-year contract concluded in 2021). RWE had only short-term contractual obligations until 2023. The company stopped all other relations with Russian partners.

As for the JV Wintershall Dea, the Russian partner at the beginning of 2022 planned to withdraw from its capital, and, being interested in the maximum sale price of its stake (27.3%), objected to the IPO, which, as part of the exit from the oil and gas business was planned to be held by the majority owner concern BASF SE. After the decision in early March to abandon new projects in the Russian Federation, the Board of Executive Directors of BASF decided in late April 2022 to withdraw from all its businesses in the Russian Federation, leaving only the production of additives for the food industry. In early May, the German leadership began to study the issue of the fate of their Russian assets in Wintershall Dea. According to preliminary information, Letter One did not plan to discuss their purchase.

[18]Ibidem.

[19]Gasspeichergesetz. https://www.bmwk.de/Redaktion/DE/Downloads/Energie/220325_faktenpapier_gasspeichergesetz.pdf?__blob=publicationFile&v=8. Cited May 5, 2022.

[20]The company was created in October 2021 by the merger of GASPOOL Balancing Services and NetConnect Germany, which previously operated two separate gas market zones in Germany. This made it possible to create a single German hub, Trading Hub Europe (THE). Consolidating 40000 km of high-pressure gas pipelines and about 700 gas distribution pipelines and being located in the center of Europe, THE is intended to become an international hub connecting other European gas markets.

RUSSIA'S RESPONSE: THE THREAT OF NATIONALIZATION OF RUSSIAN ENERGY ASSETS IN GERMANY

On March 23, 2022, the President of the Russian Federation decided to switch on a new scheme of payments for Russian gas with buyers from "non-friendly" countries, including Germany, from April 1 of this year. On March 31, V.V. Putin signed Decree No. 172 "On a special procedure for the fulfillment of obligations to Russian suppliers of natural gas by foreign buyers."[21] The leaders of the EU countries, including Germany, perceived this move by the Russian side as allegedly another use of gas by Moscow as an "energy weapon" and as a "gross violation of contract practice" (Konoplyanik, 2022). From the point of view of Berlin, there is a real threat of cessation of gas supplies.[22] In anticipation of such a decision, BMWK already announced on March 30 that the first stage (out of three) of the Emergency Gas Supply Plan (Notfallplan)[23] was put into operation.

Against this background, the leadership of Gazprom, in anticipation of possible sanctions measures against its subsidiary Gazprom Germania GmbH[24] at the end of March, decided to transfer it to the ownership of another Russian legal entity, Palmary JSC (through Gazprom Export Business Services LLC), which, in turn, announced its readiness to liquidate this subsidiary. Despite the fact that the transaction was notarized in Berlin, BMWK declared it illegal on April 4, citing the Law on Foreign Economic Activity, which requires the mandatory permission of ministry officials. In order to "ensure the security of a part of the country's critical infrastructure," it urgently introduced trust management in the person of the Federal Network Agency over the now "former," from its point

[21]The new scheme works as follows: on the basis of an application, a foreign company opens two special K-type accounts in Gazprombank, authorized for settlement operations for gas supplied: foreign currency (in the contract currency) and ruble ones. When purchasing gas, the buyer transfers the currency to a foreign currency account, from which the bank sells it on the Moscow Exchange on their behalf and credits the received amount to the supplier's ruble account, after which the payment is considered to have been made. In the absence of payment or an attempt to pay in another way, export gas supplies are terminated.

[22]Russland akzeptiert nur noch Rubel, Tagesschau, March 23. https://www.tagesschau.de/wirtschaft/weltwirtschaft/gaslieferungen-russland-rubel-101.html. Cited May 1, 2022.

[23]Bundesministerium für Wirtschaft und Klimaschutz ruft Frühwarnstufe des Notfallplans Gas aus – Versorgungssicherheit weiterhin gewährleistet, BMWK, March 30. https://www.bmwk.de/Redaktion/DE/Pressemitteilungen/2022/03/20220330-bmwk-ruft-fruehwarnstufe-des-notfallplan-gas-versorgungssicherheit-gewaehrleistet.html. Cited May 5, 2022.

[24]Gazprom Germania owns gas trader Wingas, underground gas storage operator Astora, Gazprom Schweiz, Gazprom Marketing & Trading, Wien GmbH, Gazprom NGV Europe, and Vemex S.R.O. It is also a minority shareholder (49.98%) of gas transportation company Gascade.

of view, company of the Russian concern until September 30, 2022 (Belov, 2022a).

The production assets of Rosneft Deutschland GmbH, the third largest in Germany in terms of oil refining of crude oil (up to 12.8 million tons per year, i.e., more than 12% of Germany's capacity), turned out to be at risk of nationalization or forced sale, in the first turn, the Raffinerie GmbH refinery in Schwedt an der Oder[25] (Belov, 2022a; Kotov, 2022).

On April 12, 2022, it became known about the preparation of amendments to the Energy Security Law (Energiesicherungsgesetz (EnSiG)), adopted by the Federal Republic of Germany in 1975 after the global oil crisis, but for four and a half decades almost not applied in practice. One of the main reasons was the desire of the government to introduce mechanisms for more stringent regulation of subjects of critical energy infrastructure. At the end of April, the amendments were formalized into a corresponding bill submitted to the Bundestag for consideration.[26]

The 50-page document provides for the right of the state, in the event of a security threat from enterprises related to critical infrastructure, to either introduce their external management (for six months or more), or to organize their alternative acquisition by third parties, or nationalize. A prerequisite for this is the risks of failure by a specific economic entity to fulfill its obligations to customers in a specific sector of the energy economy, which may jeopardize the country's sustainable energy supply. However, the new rules allow their introduction before such risks occur (see paragraphs 17–23 of EnSiG). The amendments provide for the "creation of prerequisites" to prevent the so-called "critical components" (obviously, it is referred to primary minerals) from entering a critical energy structure in the event that their producer is controlled by a non-EU state, since this endangers "the public order or the security of Germany." It is obvious that the authors of the project had Russia in mind. The document also proposes corresponding changes to the Energy Management Act and the Gas Safety Ordinance (Gassicherungsverordnung).

At the end of April 2022, Gazprom refused to accept payments from Gasprom Germania (through its structure Gazprom Marketing & Trading Ltd), which it tried to make according to the new procedure, in fact expressing a protest against the external management of its former assets. The decision of the German partners to participate in the new scheme of payments for Russian gas depends on the preservation or termination of their contractual relations with Russia.

CONCLUSIONS

The former unique model of German–Russian cooperation in the energy sector, formed over five decades and proving its reliability and efficiency, is becoming a thing of the past. Following the strategic decisions of Brussels, Berlin froze interdepartmental and scientific and technical cooperation with the Russian Federation in the energy sector and consistently refuses to import primary minerals from the Russian Federation, setting the goal of achieving complete energy independence from Russia. During 2022, Germany intends to stop importing hard coal and crude oil and conclude new contracts with alternative suppliers. An intractable problem for Berlin will be the organization of the supply of refineries in East German Schwedt. It will not be easy to find an alternative for Russian oil products.

The most difficult task is to abandon pipeline gas, guarantee its replacement with other sources, and organize sustainable LNG supplies (including the construction of the necessary infrastructure), as well as increase energy efficiency/energy saving in these conditions and accelerate the energy transformation of the German national economy. Such a transitional period may drag on for many years, during which, at least until 2030–2035, Uniper and EnBW could receive certain volumes of Russian gas through existing gas pipelines. Time will tell how much Berlin will be able to abandon pipeline supplies from the Russian Federation completely. Let us express doubts about the attainability of this goal.

There are certain hopes that Uniper, EnBW, and RWE will agree to new terms of payment for Russian gas. The prospects for resolving the conflict situation with Gazprom's property, Gazprom Germania and its subsidiaries, remain unclear. The government submitted to the Bundestag a bill that gives the state the right to introduce not only external management, but also to nationalize such structures that are critical for the country's energy security. Rosneft, which could lose its shares in its refineries (primarily in Schwedt), is also at risk. German energy concerns abandoned new projects in Russia and expressed their readiness to sell their Russian assets.

The main political goal of Germany (as part of the collective West) is to deprive the Russian state of foreign exchange income generated by the sale of oil, gas, and coal through unprecedented large-scale sanctions; to worsen significantly the socio-economic situation in the country; and, as a result, to encourage Russian citizens to "take to the streets in order to overthrow the government." On the other hand, in Ger-

[25]On February 21, 2022, the German antimonopoly authority allowed Rosneft to exercise the preemptive right declared in November 2021 to purchase 37.5% from Shell in the capital of this refinery. Thus, its share could increase to 91.67%. But the deal was slowed down by R. Habek. Immediately after the start of the SMO, at his direction, BMWK initiated the so-called investment verification procedure.

[26]Entwurf eines Gesetzes zur Änderung des Energiesicherungsgesetzes 1975 und anderer energiewirtschaftlicher Vorschriften, BMWK, April 21. https://www.bmwk.de/Redaktion/DE/Downloads/Gesetz/entwurf-eines-gesetzes-zur-anderung-des-ensig.pdf?__blob=publicationFile&v=6. Cited May 5, 2022.

many, in all spheres, a new "culture of canceling Russia" is being formed, there is a mass repentance of the majority of German politicians who previously acted as the main protagonists of the development of comprehensive German–Russian cooperation and now recognize the wrongness of their actions. From an economic and political point of view, the "cancel culture" provides for a complete rejection of the import of fossil Russian raw materials, which have become a toxic commodity in the understanding of the German establishment. Here, the establishment supports the readiness of the state to confiscate the property of Russian concerns in critically important areas, primarily in the energy sector. At the same time, Berlin is ready for the negative consequences of the inevitable rupture of traditional supply chains from the Russian Federation, rising inflation, unemployment, falling economic growth, slowing down of the energy transition, and reducing the attractiveness/competitiveness of the German economic space. The government has already adopted and will continue to adopt various programs to help businesses and households that suffer losses due to the refusal of energy cooperation with Russia and the transition to other alternative supplies.

Against the background of the growth of Germany's energy independence from Russia, there will not be a break in all relations in the field of energy. Certain links between the main economic players will remain. In the field of energy efficiency/energy saving, there is still a potential for interaction not only between large, but also between small and medium-sized businesses. The rejection by the European Union and Germany of energy cooperation with the Russian Federation may slow down the achievement of climate targets in Europe. For the duration of the SMO, there will be an ice age in energy cooperation between Germany and the Russian Federation with "signs of life," which, after its completion, may move into a phase of gradual restoration of bilateral relations, primarily at the entrepreneurial level. Their qualitative and quantitative parameters will be determined by other conditions.

CONFLICT OF INTEREST

The author declares that he has no conflicts of interest.

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