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***To some problems of energy security of the Federal Republic of Germany***

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Energy security is currently one of the most pressing problems for Germany within the system of international relations. The ambiguity of energy security term for this country is the reason for the inability to pursue an adequate energy policy in the international arena. This, in turn, led to the energy crisis in Germany at the present stage.

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The concept of energy security is blurred. Stanford University professor D. Victor compared the term *energy security* to the Rorschach test, during which individuals see what they want to see in an ink blob. This explains the divergence in the understanding of energy security in different countries. However, it can be assumed that Germany, being an active importer of energy carriers, might rely on one of the first formulations of this concept put forward by an American source economy specialist Daniel Yergin: “*the provision of the state with reliable energy* *supply...* *with a proportional combination of volume, price, protection from supply failures and changes in consumption standards.*”

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However, a serious problem lies in the absence of visible political and scientific-research prerequisites to shape a state understanding of energy security in Germany. One important feature has to be highlighted in the contemporary German scientific and political discourse. Both politicians and researchers of German international relations almost unanimously agree that Germany's energy security can only be ensured at the supranational level. At the present stage of EU integration, they see no possibility of another solution to the dilemma of energy security. For example, L.N. de Moraes, Professor of Law at the University of Berlin, and K. Muekusch, Doctor of Political Sciences, represent opposing views on German energy security – neoliberal-functionalistic and neoclassical-realist, respectively. Nonetheless, both of the two researchers confirm that the EU energy network should be unified and indivisible.

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It should be admitted that the German political discourse is largely divorced from modern research in the field of political economy of energy. Despite the similarities that can be detected between the conclusions of scientists and the views of politicians, in the political environment there is a significant fascination with the mechanistic linking of purely political problems (for example, forced European integration) with energy security problems.

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Certainly, it cannot be claimed that the concept of energy security in Germany has not been formed at all. Some theses mentioning the concept of energy security can be observed in the relevant energy acts of Germany: *the Energy Action Program until 2030*, the updated strategy *Energy Transition: A new policy for Germany* (2016), as well as *the German Energy Efficiency Strategy until 2050*. These documents specify ‘priorities in the field of energy security’. On the other hand, They do not elaborate on the necessary conditions to achieve energy security, on measures to be taken and on the underlying reasons.

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Nevertheless, as a result of studying the documents on the energy strategy of Germany, the following general principles of energy security can be still distinguished:

* Striving to implement the concept of *energy transition*. Within the practical dimension, renewable energy sources are considered as a more profitable alternative to oil, gas and atom judged by a number of economic indicators. Compared to fossil energy sources, green energy has a lower added value, lower losses in electricity generation and, in addition, provides a high incentive for competitive investments and technologies (Energy Efficiency 2050). Germany has been pursuing a policy of "energy transition" since 2011, when, influenced by the Fukushima disaster, Germany disabled seven nuclear reactors.
* Transparency on the domestic energy market, i.e. the possibility for consumers to receive information about the true level of energy prices. In order to achieve this objective, import duties, as well as income taxes on energy and its consumption are being developed within a progressive scale, so that market players maintain a balance of prices for end consumers. The goal is to create equal conditions for all consumers, to ensure equal access to the market for all technologies through the market of regulated contracts, as well as through the use of smart meters to ensure decentralized flexibility. However, the preferences are offered for the companies that are developing new technologies. These provisions are regulated by the Energy Industry Act with comprehensive amendments of 2005 and 2011.
* Energy efficiency in conditions of dependence on energy imports. The meaning of this approach is that energy distribution companies have the right to buy energy where they consider it most cost-effective. The unified European energy network allows the redistribution of electricity to those regions of Europe where it is most in demand at a given time. This approach saves network capacity and cuts financial costs. Germany can also access electricity from neighboring countries when needed, which increases the reliability of electricity supplies to Germany. (Strom 2030). This brought its positive results in November 2022 during the energy crisis in Europe, when German Federal Chancellor O. Scholz and French President E. Macron signed an energy exchange act.
* Security of energy supplies, which means reliable long-term energy supplies in the most efficient ways. The presence of a considerable number of transit countries and ‘bottlenecks’ (sea straits and channels) on the route of hydrocarbons from the producer to the final consumer is associated with economic and political risks. It is worth remembering that net exporters of global importance (in particular, the monarchies of the Persian Gulf) tend to conclude contracts for *spot* oil and gas supplies.

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However, it should be noted that the main directions of energy security highlighted above do not take into account a number of political, economic and social risks.

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1. The German and, in general, the Western school of international energy studies sees Germany only as an integral part of global energy security. The evidence base is a demonstration of the strong interconnectedness between such EU legislative acts as Article 164 of the Lisbon Treaty on the Functioning of the EU, the EC Green Books of 2008 and 2015 (where, by the way, there is a degradation of the concept of energy security), and the energy acts of Germany. However, the feasibility of such an approach to energy security has hardly been studied in practice – neither has the crisis management system of European energy been studied as a whole. This may explain Germany's unpreparedness for the new energy challenges of our time.

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2. The consideration of the Germany state energy security within the framework of European integration poses certain problems. Small European states that are part of Germany's energy security zone are deprived of the opportunity to import high-quality and relatively cheap Russian gas. In this regard, they are forced to purchase expensive and lesser quality gas from Norway and the USA in the price range of 2700-3100 US dollars for 1000 m3. This is the consequence of both EU pressure and logistical constraints on the ability to attract alternative suppliers, for example, from Central Asia (Azerbaijan, Turkmenistan).

It is also impossible to independently develop the infrastructure of "green" energy in these countries; as a result, they resort to the help of the very Germany, China and the USA (in a ratio of 50:35:15 according to Eurostat data).

It is important to bear in mind that Germany is not the only actor that can borrow gas from neighboring countries. They can also use gas or electricity from East Germany, which, very conveniently has been falling into the stage of deindustrialization and now needs smaller volumes of gas. The question arises who will take on the role of the guarantor of energy security in Europe and how beneficial this role is going to be for Germany itself.

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3. German politicians do not take into consideration the possibility of politically motivated actions on the part of exporters of raw materials. The concept of political motives itself is viewed narrowly. These are not necessarily disruptions or refusals of supplies in order to cause damage to the importing country. For example, not only the unexpected condition to pay for gas supplies in rubles, which was put forward by Gazprom to Germany in March 2022, can be considered in this vein, but also the long-term consistent unwillingness of Qatar and Kuwait to develop joint projects with the European Union because of its influence expansion to the Asian region (up to 70% of export capacity utilization). Consequently, the German government is biased in favor of the preservation of the ‘post-Western’ international relations system to be a prerequisite for reliability of energy policy. For example, Klaus Ernst, curiously - chairman of the Committee on Climate and Energy Protection in the Bundestag, notes as the main threat to energy security the subversive actions of transit countries. Disruptions in the supply of Russian gas through non-EU Ukraine have been going on with varying frequency since 2006, and K. Ernst explains this not by the political motivation of the Russian leadership, but by dubious actions and infrastructure troubles of Ukrainian Naftogaz.

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4. Germany's energy acts rule out the low elasticity of the global energy market. Due to the global and regional crises that have become more frequent in recent decades, and as an implication of too much faith in the future of the *green transition*, 2010 witnessed a significant decline in investments in oil and gas production around the world. This inevitably leads if not to a shortage, then at least to a decline in the mathematical expectation of the raw materials extraction and processing levels, which in turn causes panic in speculative commodity markets, as well as an unjustified rise in prices for transportation and use of energy.

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5. The *green economy* is not a full replacement for hydrocarbons. *Eurostat* cites data that by the beginning of 2021, about 40% of energy carriers in Germany were renewable energy sources. However, there are still no guarantees whatsoever that RES will be able to ensure the continuity of production cycles at enterprises and to meet the overstated everyday-needs of households. From 2017 to 2019, the growth rate of the introduction of wind power installations fell ~~by~~ more than 5 –fold. Simultaneously, according to a survey by *Die Zeit* newspaper conducted in February 2020, 80% of German respondents disapprove of the rapid transition to *green energy*.

It should be noted that the forced transition to "green" energy (excluding "green" hydrogen) is carried out contrary to the decisions of the EU. The "green books" of the European Commission, which, as a rule, largely reflect the position of Germany, have always stated that the goal of EU energy policy should not be to minimize dependence on energy imports or maximize energy autonomy. In addition, the final report of the 2020 Commission states that the goal of the EU energy policy is to expand the foreign policy dimension of energy.

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6. There is a fundamental social risk. It implies the possibility of a social-political crisis onset provoked by insufficient energy supply to citizens, which is currently being observed in Germany. On October 10, 2022, about 10,000 Germans came to the Bundestag, demanding to buy gas from Russia, despite the sabotage on the *Nord Stream* pipelines. The social risk is also associated with the fact that the costs of intensifying green energy and providing new energy security problems are likely to be solved at the expense of the middle class, which can be described in detail separately.

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**Thus, it can be concluded that the concept of Germany’s energy security, being poorly defined, is also underdeveloped and under investigated.**

Firstly, energy security should be considered at the present stage as an integral part and the main component of national security. In the case of Germany, which is losing its role as a European gas hub, but still constitutes the core of the EU, we talk about of a pan–European security.

Secondly, *energy transition* is presented as a somehow natural necessity that should be achieved regardless of internal and external conditions – this view should be fundamentally revised.

Thirdly, there is no system of crisis management and no ways to solve unexpectedly and rapidly emerging problems of energy security.

Fourthly, the interests of citizens in energy consumption are not singled out as the main priority, which is a fundamental mistake.