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The Influence of Geopolitical Factors on the Energy Sector: Analysis of Challenges and Risks

Global trends in the functioning of the energy sector are analysed in terms of the major challenges and risks. The systematic approach made it possible to study the simultaneous influence of a series of factors on the global energy sphere. The hypotheses are verified that: 1) geopolitical factors have the strongest influence on the energy sphere on a global scale today; 2) the current global energy transition will be a complicated and protracted process, during which new forms of energy dependence of some states on others are likely to emerge. The purpose of the research is a comprehensive analysis of global trends in the functioning of the energy sector, and the determination of the system of challenges and risks that affect it. The objectives of the study are: 1) elucidation of the influence of energy resources on the geopolitical power of states and the influence of geopolitical factors on energy security, stability of the energy system; 2) analysis of the impact of the current energy transition on global security and new probable challenges and dependencies. Decarbonization, digitalization, and decentralization are identified as the key trends in the development of global energy, which are subject to numerous challenges and risks (geopolitical, ecological, economic, social, etc.). It is noted that on a global scale, the energy sphere is characterized by: a gradual decrease in the share of fossil fuels and an increase in the share of green energy; problems with the solidarity of states regarding the energy transition and its pace; a strong influence of geopolitics on the energy policy; weaponization of energy resources; growing risks of forming new energy dependencies on those states that mine and enrich critical metals and minerals, etc.

Keywords: energy policy, geopolitics, energy security, energy transition, weaponization of energy resources, energy sovereignty, sustainable development, energy securitisation.

Вплив геополітичних чинників на енергетичну сферу: аналіз викликів та ризиків

Досліджено глобальні тренди функціонування енергетичної сфери з точки зору основних викликів та ризиків. Системний підхід уможливив вивчення впливу на енергетичну сферу глобального масштабу одночасно низки чинників. Верифіковано гіпотези про те, що: 1) найсильніший вплив на енергетичну сферу в її глобальному масштабі сьогодні мають саме геополітичні чинники; 2) нинішній енергетичний перехід в глобальному масштабі буде складним та затяжним процесом, під час якого ймовірна поява нових форм енергетичної залежності одних держав від інших. Мета дослідження полягає у комплексному аналізі глобальних трендів функціонування енергетичної сфери, визначення системи викликів та ризиків, які впливають на неї. Завданнями дослідження визначено: 1) з'ясування впливу енергоресурсів на геополітичну міць держав та впливу геополітичних чинників на енергетичну безпеку, стійкість енергетичної системи; 2) аналіз впливу нинішнього енергетичного переходу на глобальну безпеку та нові ймовірні виклики та залежності. Основними трендами розвитку світової енергетики визначено

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декарбонізацію, цифровізацію та децентралізацію, які піддаються численним викликам та ризикам (геополітичним, екологічним, економічним, соціальним та ін.). Відзначено, що в глобальному масштабі енергетичну сферу характеризують: поступове зменшення частки викопного палива і зростання частки зеленої енергії; наявність проблем зі солідарністю держав щодо енергетичного переходу та його темпів; сильний вплив на енергетичну політику геополітики; вепонізацію енергоресурсів; зростання ризиків формування нових енергетичних залежностей від тих держав, які видобувають і збагачують критичні метали та мінерали та ін.

Ключові слова: енергетична політика, геополітика, енергетична безпека, енергетичний перехід, вепонізація енергоресурсів, енергетичний суверенітет, сталий розвиток, енергетична сек'юритизація.

Statement of the scientific problem and its significance. Energy has long been the driving force of world politics. One global energy model was replaced by another, but all of them invariably affected international relations and security. Energy sources became the basis of the prosperity of states, as well as caused sharp conflicts and wars. Each transition to new energy sources changed the geopolitical map of the world, determined the global balance of power, created new challenges and risks.

Energy resources are an object of strategic interest for any state. Energy and related infrastructure are the driving forces of economic and social development. "Reliable energy supply at an affordable price is a matter of the survival of the state"³. The problem of energy shortage has not yet been overcome on a global scale. This determining role of energy resources is the reason why the energy sector is very sensitive to a wide range of factors. In recent years, these factors have included armed conflicts and wars, natural disasters, the Covid-19 pandemic, the intensification of cybercrime, etc. Moreover, energy resources are used as weapons in conflicts and wars (weaponization of energy resources). Energy markets and resource supply chains are increasingly interdependent.

Despite the existing global consensus on the importance of the role of energy resources for human life, there is no unified consolidated approach of states to energy policy. At public international events, almost all states declare their support for sustainable development (affordable and clean energy, mitigation of consequences of climate change, etc.). Instead, at the national level, states exercise their energy sovereignty, energy independence, and therefore independently determine the choice of energy resources, sources of their supply, methods of exploitation, etc.

The processes that are unfolding on a global scale about energy resources are gaining momentum and affecting almost all spheres of life. Today, Ukraine feels the consequences of the weaponization of energy resources most acutely and at the same time tries to become part of progressive trends in the energy sector. This actualizes the study of global trends in energy policy to identify the vectors of transformation, existing challenges, potential threats to the energy sector, etc.

According to our working **hypotheses:** 1) geopolitical factors currently have the strongest influence on the energy sphere, as evidenced by the increasingly aggressive weaponization of energy resources; 2) implementation of the energy transition on a global scale will be a complicated and protracted process, during which the emergence of new forms of energy dependence of some states on others is not excluded.

Analysis of the latest research on the problem. The scientific discourse is dominated by the analysis of the influence of individual factors on energy policy, such as the escalation of conflicts, the pandemic, the discovery of new deposits of hydrocarbon resources, technological innovations in the field of clean energy and energy saving, etc. Also, in the analysis of the problems of functioning of the energy sector in the global dimension, scientists mostly turn to the study of one of the factors of influence – security, environmental, economic, social, etc., or to the study of individual countries or regions. Among the researchers on the challenges and risks of the functioning of the energy sector globally are: J. Simões, F. J. Leandro, E. C. de Sousa, R. Oberoi, M. Skalamera, O. Chygryn, K. Shevchenko⁴ and others. It should be noted that the problem of functioning of the energy sector is

³ Yakoviyk, I. & Tselikh, M. 2023. Energy Security of the European Union in the Context of Russian Aggression Against Ukraine. *Problem of Legality*, 160, p. 174.

⁴ Chygryn, O. & Shevchenko K. 2023. Energy industry development: key trends and the core determinants. *SocioEconomic Challenges*, 7(1): 115-128; Simões, J., Leandro, F.J., de Sousa, E.C. & R. Oberoi (Eds.). 2023. *Changing the Paradigm of Energy Geopolitics. Security, Resources and Pathways in Light of Global Challenges*.

multidisciplinary. It is analysed primarily within the framework of economic and environmental sciences. At the same time, a comprehensive analysis of the functioning of the energy sphere from the perspective of political science and international relations has practically not been conducted.

The research methodology is a systematic approach. Problems, challenges, and risks of functioning of the energy sector on a global scale are considered as an interconnected set of processes. The systematic approach made it possible to study the simultaneous influence of various types of factors on the global energy sphere. This is important given the complexity of the architecture of the global energy system. The systematic approach allows us to reveal the multiplicity of connections and mutual influences on such a complex object as the energy sphere in its global dimension. Therefore, the set of problems, challenges and risks of the functioning of the energy sector is viewed as a system of interconnected components that form a certain integrity.

Statement of the purpose and objectives of the article. The purpose of the research involves a comprehensive analysis of global trends in the functioning of the energy sector, and determination of the system of challenges and risks affecting it. **The objectives** of the research are: 1) elucidation of the impact of energy resources on the geopolitical power of states and the impact of geopolitical factors on energy security and sustainability of the energy system; 2) analysis of the influence of the current energy transition on global security and new probable challenges and dependencies.

Presentation of the main material. The interdependence of energy resources and social and political life has been documented for a long time. Since the 18th century, when the first industrial revolution took place, energy began to act as a driving force in international relations. For most of the 20th century, the geopolitical power of states was closely linked to their availability of fossil fuels. Fear of an oil embargo, gas shortages, etc. encouraged states to conclude alliances, declare wars, and the development of new deposits of hydrocarbon resources opened up new prospects for states.

Our planet has already switched to new energy sources several times: from wood to coal, from coal to oil, and now from fossil fuels to green energy. Each transition changed the geopolitical map of the world. For example, coal and steam power were the mainstays of the British Empire in the 19th century, and in the 20th century, control over oil production and trade formed the basis of US power. In the 20th century, fossil fuels determined the power of states, and the lack of fuel and energy resources was a factor of strategic vulnerability. Oil- and gas-producing countries had fairly stable positions in the international system. Instead, those states that did not have the hydrocarbon resources or whose demand exceeded their own production were forced to adjust their foreign policy course to ensure access to the required amount of energy resources.

During the determination of energy policy priorities, the emphasis was placed on the availability of energy sources and the price of energy sources. That is, the economic parameters were the basic ones. There was no mention of the effects of hydrocarbon resources on nature, human health, or the issue of the political integrity of energy-exporting states. The geopolitical component of energy security was not given sufficient importance, etc. However, given the climate change at the global level, a strategy of limiting the use of fossil fuels was chosen to achieve net zero carbon dioxide emissions (carbon neutrality). After Russia's full-scale invasion of Ukraine, energy priorities were again revised by many states by increasing attention to the geopolitical factor of energy security.

Thus, the movement at the end of the 20th century from oil, gas, coal, fuel oil, etc. towards green generation laid the foundation for future global change, just as fossil fuels did in their time. More recently, the environmental factor has been strengthened by security challenges that have accelerated the transformation of the energy sector.

Despite the successes of renewable energy, fossil fuels currently remain the basis of the global energy system, economic growth and the lifestyle of the majority of the planet's population. The exploitation of fossil fuels has shaped the geopolitical architecture of the modern world. The existing geopolitical order is still dependent on fossil fuels and supported by military power, but a new energy transition is already underway, on an upward trajectory, and unstoppable. Green energy was once very expensive, but technological progress is changing the situation, thanks to which the pace of development of renewable energy has accelerated. Sources of clean energy generation are being integrated into the global energy system faster than any fuel in history.

es. Bern: Peter Lang; Skalamera, M. 2023. The Geopolitics of Energy after the Invasion of Ukraine. *The Washington Quarterly*, 46(1): 7-24.

The principal trends in the development of world energy are decarbonization, digitalization and decentralization⁵. These processes take place under the influence of numerous challenges, which are also dynamically changing. Nowadays, the energy policy of states is influenced by the presence/absence of their own energy sources, the level of dependence on energy imports, geopolitical positions, technological development, readiness and desire to switch from fossil fuels to alternative energy sources, the level of corruption, etc. Devastating climate changes, energy crisis in European countries amid Russia's invasion of Ukraine, uncertainty about fossil fuel prices, and prospects for the implementation of planned energy projects due to confrontation in the Middle East region are just a few factors that are affecting energy security on a global scale. Under the influence of these processes, governments are revising their national energy policy and developing strategies to guarantee energy security. Today, governments are forced to quickly respond to the problems of the functioning of the energy sector due to the simultaneous influence on it of geopolitical, ecological, economic, social, technical and technological, cultural and other factors.

In the national energy balance of many countries, there is a tendency to increase the share of green energy. This is most noticeable in the EU, but other regions of the planet are also part of this process. Democracies already have an understanding that fossil fuels harm humanity, are expensive and make communities more vulnerable to various risks, first of all, geopolitical and climatic. The result of this understanding is the movement of many states to a new energy model, which is focused on clean energy and energy-saving technologies. By 2030, wind and solar projects could potentially provide more than a third of the world's electricity, according to the Rocky Mountain Institute, an energy research organization⁶.

At present, according to the results of 2022, wind and solar power account for 12% of global electricity production, which is the maximum indicator; for comparison, in 2021 it was 10%. Today, more than 60 countries generate over 1/10 of their electricity with the help of wind and sun, and some of them manage to produce even more than 1/4 (Spain, Germany, the Netherlands, etc.). It should be also noted that green energy sources cause certain problems, and this affects the promotion of green generation projects. For example, wind turbines create noise, change visual aesthetics, negatively affect wildlife, etc. A concrete example is wind turbines in Norway, built on land traditionally used by Sami reindeer herders. The arguments of environmental activists that the rights of indigenous rights, human rights, must go hand-in-hand with climate protection and climate action are well-grounded⁷.

Currently, renewable energy sources have become securitized, that is, many states are turning their accelerated development into a security issue. However, the rising neo-authoritarianism on a global scale is now undermining the progressive efforts of the democratic community in terms of the transition to green energy. Many of those non-democratic states that have substantial reserves of fossil fuels are not interested in losing revenue from their export and their influence on international processes.

It is noticeable that the speed and interest in the ongoing energy transition of different states varies considerably. It depends on the level of their socio-economic and technological development, the availability of their own reserves of hydrocarbon resources, climate, dominant values, political regime, etc. Now, primarily highly developed democratic states are showing significant interest in energy for sustainable development. Work on creating an energy-sustainable and independent future thanks to the introduction of clean technologies has intensified there. Therefore, there is an obvious gap: some countries (Denmark, the Netherlands, Germany, etc.) are actively working in the direction of green hydrogen and other types of clean energy, while others actually refrain from implementing green generation projects (Eritrea, Qatar, Cuba, Kuwait, Libya, Mongolia, Oman, Turkmenistan, etc.) or are only beginning to consider alternative energy sources (UAE, Bahrain, etc.).

This allows us to conclude that there is no solidarity among states regarding the single global vector of energy development. The following example is an illustration of this. At the meeting of the G20 ministerial delegations (Goa, July 21, 2023), the G7 states proposed to determine new goals for re-

⁵ Chygryn, O. & Shevchenko, K. 2023. Energy industry development: key trends and the core determinants. *SocioEconomic Challenges*, 7(1), p. 115.

⁶ Bond, K., Butler-Sloss, S., Lovins, A. *et al.* 2023. X-Change: Electricity. Available from: <https://rmi.org/insight/x-change-electricity/> [24 October 2023].

⁷ Klesty, V. & Fouche, G. 2023. Thunberg, Indigenous protesters block Norway energy ministry over wind farms. Available from: <https://www.reuters.com/business/environment/thunberg-other-protesters-block-norway-energy-ministry-over-wind-farms-2023-02-27/> [03 November 2023].

newable energy. The proposals were developed on the basis of a report by the International Energy Agency. The principal fossil fuel-producing countries (Saudi Arabia, Russia, etc.) opposed the proposal to triple the green energy capacity of the G20 countries by 2030⁸ since fossil fuels are an essential part of their energy balance. China, which has the largest volumes of carbon dioxide emissions, as well as the leading exporters of coal (South Africa, Indonesia), also opposed the plan; India took a neutral position. Discussion of hydrogen production, which is seen as a potential alternative to fossil fuels, has also generated controversy. Some states want to use low-carbon hydrogen instead of green hydrogen.

Among the leading hydrocarbon-producing countries, few are ready to actively participate in the energy transition. For several countries, fossil fuels are a vital source of income and they are cautious about projects in the field of green generation. Most of the states of the Middle East are examples of this. Also, many states with low indicators of socio-economic and technological development (it concerns the Global South⁹) cannot find the resources to switch to clean energy sources. The initial price of such energy is high, and therefore dependence on fossil fuels is forcedly retained, even though all countries of the planet are obliged to counteract global warming. In fact, for such countries, the poverty trap is becoming an energy trap. At the same time, constructive trends emerged in the approaches of individual states. For example, South Africa is already developing the production of green hydrogen. Saudi Arabia, while continuing to invest in the expansion of oil production capacity, is also showing interest in modular nuclear reactors, geothermal and solar energy sources, carbon-capture systems¹⁰, and is generally planning for a life beyond oil export revenues.

Although Saudi Arabia continues to invest in the expansion of oil production capacity, it is showing interest in modular nuclear reactors, geothermal and solar energy sources, carbon-capture systems and, in general, is already planning the country's livelihood outside of oil export revenues.

It is obvious that under the conditions of the energy transition, the volume of trade in fossil fuels will decrease. Instead, new goods (renewable hydrogen, biofuel, etc.) will increasingly be the subject of international trade. However, these processes will not be as rapid as the climatic and geopolitical situation requires. Whatever the speed of these processes, the fact that they are happening lays the groundwork for a gradual change in the global balance of power. This follows from the fact that green energy production capacity is much more evenly distributed than hydrocarbon resources.

Fossil fuels and critically important natural resources have repeatedly directly or indirectly become the cause of military conflicts, and one of the types of weapons in various international confrontations. Examples include Russia's purposeful destruction of the energy sector of Ukraine, Israel's termination of electricity supplies to the Gaza Strip after a terrorist attack by Hamas, and others. The tendency to weaponize energy resources in various conflicts and wars is constantly increasing. The energy sphere is becoming particularly politicized.

Today, certain states use fuel and energy resources as a weapon to pursue their national interests. The use of energy resources as a weapon has serious political, economic, and social consequences. Trade in energy resources can become a tool for achieving political goals. Most often, the weaponization of energy resources is manifested in the form of termination or restriction of energy supplies, refusal to import energy resources for non-commercial reasons, changes in the price of energy sources contrary to signed agreements, establishment of control over energy infrastructure, etc. Very radical manifestations of the weaponization of energy resources are recorded, such as targeted destruction of energy infrastructure, sabotage, etc.

Russia is not the only state that resorts to energy pressure, blackmail, although it is the most radical in the weaponization of energy resources. The US has historically imposed more oil embargoes than any other country. One of the first cases at the global level was the actions of the Arab member states of the Organization of the Petroleum Exporting Countries (OPEC) during the oil crisis of the 1970s.

⁸ Singh, S.C. & Varadhan, S. 2023. Exclusive: Russia, Saudi oppose G20 proposal to triple green energy capacity. Available from: <https://www.reuters.com/sustainability/climate-energy/russia-saudi-oppose-g20-proposal-triple-green-energy-capacity-2023-07-21/> [08 November 2023].

⁹ Babayomi, O.O., Dahoro, D.A. & Zhang, Z. 2022. Affordable clean energy transition in developing countries: Pathways and technologies. *iScience*, 25 (5), article 104178.

¹⁰ Di Paola, A. & Matthew, M. 2023. Saudi Arabia Seeks to Study Small Nuclear Reactor Technology. Available from: <https://www.bloomberg.com/news/articles/2023-10-08/saudi-arabia-is-interested-in-small-nuclear-reactor-technology?srnd=premium-middle-east> [26 October 2023].

OPEC used oil as a weapon against Western powers that supported Israel in the 1973 Yom Kippur War. After the start of the war, the Arab member states of OPEC agreed to use oil supplies as a weapon against the pro-Israeli states of the West. The oil embargo was primarily a political act. The OPEC countries dramatically raised oil prices (from 3 to 12 dollars per barrel) and since these countries controlled about 2/3 of the explored oil reserves, many countries (especially in Europe) suffered greatly from the oil embargo. Today, Turkey, which has taken an anti-Israel position, has stopped the implementation of a plan for the joint exploration of energy resources in the Mediterranean Sea with Israel and the export of gas to Europe. The leader of the Lebanese Hezbollah movement, H. Nasrallah, called on all Arab states to stop exporting oil to Israel. The High Council of State of Libya called for the cessation of energy supplies to all pro-Israeli states. The fact that 120 states on October 27, 2023, voted for the de facto anti-Israel resolution of the UN General Assembly, among many other reasons, may also be due to the expectation of further profitable contracts for the purchase of oil and gas from the states of the Middle East. There are more and more examples of this every year, which indicates the intensification of the weaponization of energy resources.

It is worth mentioning that energy resources can act as a weapon both on the demand side and on the supply side, that is, not only the refusal to supply energy sources but also the refusal to buy them is a manifestation of the weaponization of energy resources. This is illustrated by the relations regarding the import-export of energy resources between the EU and Russia. The EU and allied sanctions against Russia have created their own energy weapon on the demand side; therefore, the aggressor state suffers severe financial losses. The EU introduced a ceiling price for crude oil (December 2022), and limited the price of Russian petroleum products, including diesel fuel and fuel oil (February 2023). Russian oil is currently sold at about half the world reference price, and long, expensive transport routes to China and India significantly affect the revenues of the Russian state budget. As the interdependence of states regarding energy resources grows, it can cause serious economic and political damage, affect the livelihoods of households, undermine the legitimacy of governments, etc.

Energy resources remain an important tool of foreign policy, especially for non-democratic states. There, fossil fuel rents contribute to an aggressive foreign policy. Thanks to the income from the export of fossil fuels, the defence-industrial complex develops, weapons are built up, which are directed against other states, and are also exported to support neo-authoritarian regimes. Energy-rich neo-authoritarian states use the export of energy resources as a defensive tool of their policy. Energy influence is used to prevent external interference, ensure the survival of an undemocratic regime, etc. Non-democratic states use their energy resources as a tool to coerce other states, to punish them for their unfriendly attitude towards themselves.

In the long term, the energy transition is likely to weaken the ability of states that function mostly due to the rent from the export of fossil energy sources to exert pressure on other actors of international relations. However, in the short term (10-20 years), such states will cooperate and thereby slow down the energy transition¹¹.

Geopolitical factors have a decisive influence on energy security, energy prices, development of energy infrastructure and its maintenance. Examples are oil and gas pipelines that pass through the territories of many states, nuclear fuel for the operation of nuclear power plant reactors, which some states purchase from others.

The ongoing changes in the energy sector have the potential to affect geopolitics no less than previous energy transitions from wood to coal, and from coal to oil. The contours of new challenges for states, interstate relations, and global security have already been outlined. The energy transition from fossil fuels to renewable energy sources can affect geopolitics and international relations for several reasons:

1. Fossil fuels are largely concentrated in the territory of certain states, while renewable energy sources are highly dispersed. The importance of energy hubs, such as the Suez Canal, which are now vital to the global supply of oil, will diminish. Dependence on governments that are leading exporters of fossil fuels is expected to decrease.

2. The role of states that mine and enrich rare metals and critical minerals (bauxite, lithium, titanium, strontium, rare earth elements, etc.) will grow. They are the foundation for a successful green

¹¹ Skalamera, M. 2023. The Geopolitics of Energy after the Invasion of Ukraine. *The Washington Quarterly*, 46(1), p. 8.

transformation. The supply chains of such metals and minerals are vulnerable to various geopolitical risks, such as political instability, wars, corruption, etc., and the demand for them far exceeds the supply. The leading countries producing clean technologies are already experiencing a shortage of advanced critical materials and metals and are competing for them. This can become an obstacle to achieving the sustainable development goals. Obviously, the states that can produce lithium-ion and similar batteries will receive not only economic but also geopolitical advantages for the next decades. From the point of view of geopolitics, the greatest concern is China's control over the mining and enrichment of such metals and minerals (lithium, gallium, germanium, etc.). China has already resorted to certain restrictions on their exports. Although not only in the depths of China there are rare earth elements, lithium, copper, cobalt, graphite, etc., this state occupies a leading position in their enrichment. Russia also owns huge geological resources (nickel, titanium, copper and other ores). Such resources with upward dynamics are already being used as a tool of geopolitical pressure. However, scientific and technical progress does not stand still and the search for alternatives to scarce minerals and metals is ongoing.

3. Renewable energy sources use endless flows of wind, water, sun, and heat from the earth's crust. These energy sources are inexhaustible, unlike fossil fuel deposits. Nevertheless, renewable energy facilities are as vulnerable to external influences and aggression as energy infrastructure facilities that operate on fossil fuels. Ukraine during the period of Russian aggression is an example of this, because energy facilities of all kinds were damaged.

Conclusions. The key trends in the development of world energy are decarbonization, digitalization, and decentralization. They occur under the influence of numerous challenges (geopolitical, ecological, economic, social, etc.). From the point of view of geopolitics, it is important that the accelerated transition to clean energy sources, the introduction of energy-efficient technologies, etc. occurs not only for climatic reasons, but also for political reasons.

Nowadays, the energy policy and preferences of states regarding the choice of energy sources and energy suppliers are influenced by the presence/absence of their own energy sources, the level of dependence on the import of energy resources, geopolitical positions, the level of socio-economic and technological development, the political will of the authorities to implement the energy transition, the level of corruption, the characteristics of the culture of a particular nation, etc.

Energy transformation is becoming an important factor in changing geopolitics in the 21st century. Given the emergence of economically competitive sources of clean energy, the approach that determines the stability of a country by the availability of reserves of hydrocarbon resources is being revised. The energy crisis of 2022-2023 in European countries accelerated these events. It is apparent that renewable energy sources can cause as large-scale changes as fossil fuels once did. Clean energy increases the likelihood of greater energy independence for more nations.

The current energy transition affects geopolitics because: 1) renewable energy sources are much more dispersed than fossil fuels, they are available in one form or another in most countries, and their reserves are relatively inexhaustible; 2) dependence on states that extract and transport fossil fuels will decrease, but there is a risk of dependence on states that extract metals and minerals needed for clean technologies; 3) in the long term, the energy transition will weaken the ability of states that function primarily due to rents from fossil fuel exports to exert pressure on other actors of international relations.

The major trends of energy policy at the global level are:

1) *changes in the energy market*: the share of fossil fuels is decreasing (not rapidly), and the share of green energy (renewable hydrogen, biofuel, etc.) is increasing. It is obvious that the era of fossil fuels on a global scale will not end in the coming decades and the transition to clean energy sources will not occur with the same support in various countries;

2) *problems with the solidarity of states on the energy transition and its pace*. Despite the formal declaration by almost all states of the goals of sustainable development, among which there are also energy goals, their implementation is carried out with great differences, encountering open or more often latent resistance of individual governments, financial and technological obstacles, etc.;

3) *the strong influence of geopolitics on energy policy*. The market power of energy suppliers has long been political. The most striking example is the use of energy resources as a weapon in various conflicts and wars. Both non-democratic and democratic actors of international relations resort to such weapons. Refusal to sell or buy energy resources, price changes, targeted sabotage and terrorist acts on

energy infrastructure facilities, etc. are examples of increasingly aggressive weaponization of energy resources;

4) *the growing risk of forming a new type of energy dependence* on those states that extract and enrich critical metals and minerals. Without this resource, the implementation of clean technologies is currently impossible. Consequently, attention is now being paid to the question of what possible security risks a particular agreement regarding energy resources may cause;

5) *the price of energy resources and their sufficiency are reflected in the public sentiment, and the level of support for the subjects of the election process.* This often results in governments making populist decisions that are inconsistent with global climate and security priorities;

6) *the focus of energy policy on the formation of a culture of energy saving* at all levels (private households, business, public sector, etc.). This trend is, first of all, specific to technologically developed states with a high level of population welfare, an active civil society, and a developed value of social responsibility. So far, it has not acquired a global scale.

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