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THE PROBLEM OF ENERGY DIVERSIFICATION IN THE FOREIGN POLICY OF THE REPUBLIC OF UZBEKISTAN

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Abstract. With the rise of Sh. Mirziyoyev to power, the Republic of Uzbekistan has actively developed its foreign policy, expanding mutually beneficial international cooperation, attracting foreign investments, and enhancing both economic and political security. Energy diversification is a crucial aspect of Uzbekistan's foreign policy, as the state aims to reduce its reliance on energy imports and enhance its energy security. In recent years, the government has promoted renewable energy sources, such as solar energy, and initiated efforts to construct a nuclear power plant. By investing in green energy projects, Uzbekistan aims to reduce carbon emissions and build a more sustainable energy system with reduced dependence on fossil fuels.

This article analyzes the main aspects of Uzbekistan's foreign policy related to energy security and the role of international cooperation in this process. Special attention is given to the study of alternative energy sources and the construction of a nuclear power plant. The article also presents both the advantages and disadvantages of these energy strategies. Furthermore, recommendations are provided to strengthen Uzbekistan's energy independence and security, contributing to the country's sustainable development.

Despite the complexities involved, which require careful planning and cooperation at both national and international levels, the findings indicate a growing trend toward energy diversification in Uzbekistan.

Key words: foreign policy, Republic of Uzbekistan, solar energy, nuclear power plant, energy security, energy diversification, energy sources, Sh. Mirziyoyev

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Introduction

Energy diversification is one of the most critical issues in Uzbekistan's foreign policy, as the energy sector is a key component of any state's functioning. This sector significantly influences economic development, ensuring comfortable

living conditions and creating prerequisites for the effective operation of various social spheres. It is no coincidence that energy security is considered a fundamental aspect of national security.

According to the International Energy Agency (IEA), energy security is defined as the uninterrupted availability of energy sources at an affordable price [1]. As a landlocked country with limited natural resources, Uzbekistan relies heavily on energy imports to meet domestic electricity and fuel demands. The country primarily imports gas from neighboring nations such as Kazakhstan, Turkmenistan, and Russia, making it vulnerable to geopolitical tensions and price fluctuations in the global energy market.

Since gaining independence, Uzbekistan's energy policy has focused on ensuring energy security and leveraging the national energy sector to address social and economic challenges. However, to maintain energy independence and export potential, it is crucial to enhance energy efficiency and create favorable conditions for adopting new energy technologies.

In recent years, Uzbekistan has faced increasing problems in the energy sector, affecting other areas of the economy. Electricity shortages, particularly during winter, have become a significant issue. Given that the energy sector has seen minimal investment since independence, addressing this challenge must be a priority.

The purpose of this article is to analyze the key aspects of Uzbekistan's foreign policy related to energy security and to examine the role of international cooperation in this process.

In our view, the main task of Uzbekistan in the energy sector is the diversification of energy sources and ensuring energy security. Thus, Uzbekistan is implementing a comprehensive energy policy, where not only reducing dependence on exports plays a key role, but also renewable energy sources (RES) and the construction of nuclear power plants are of particular importance in the long-term perspective. Consequently, the article also touches on the topic of energy security in the Republic of Uzbekistan, the issue of building an atomic power plant and the possibility of transitioning to more environmentally friendly, safe and renewable energy sources.

Materials and methods

The methodological basis consists of both general scientific and international relations research methods. One of the general scientific methods used in the study is systems analysis. The historical method helped to trace the historical evolution of energy policy in Uzbekistan. By applying SWOT analysis, the strengths and weaknesses of the current energy policy of Uzbekistan were identified, and possible threats associated with the process of diversification of energy resources were identified. Quantitative and qualitative data, primarily from 2016 to 2023, were analyzed. The conclusions were drawn based on the study of official documents and government strategies of Uzbekistan in the energy sector, the Concept for the Development of Nuclear Energy in Uzbekistan for 2019–2029, the

Roadmap for the Transition to Low-Carbon Energy until 2050, as well as reports and data from the Ministry of Energy of the Republic of Uzbekistan. The article examined secondary sources. Secondary sources are represented by publications, mainly information sites, as well as analytical resources. An analysis of official government documents, official websites, strategies and programs relating to the energy policy and foreign policy strategy of Uzbekistan, international agreements and memorandums of cooperation in the energy sector, international reports and reports was carried out. In particular, the study was based on data from the Ministry of Energy of the Republic of Uzbekistan: Statistical reports on electricity consumption and forecasts; information on renewable energy and nuclear power development projects; reports and data from the Organization for Economic Co-operation and Development (OECD), the United Nations Development Programme (UNDP), and the Organization for Security and Co-operation in Europe (OSCE) on energy security issues; World Bank reports on the transition to "green" energy; documents from the national legislative database of the Republic of Uzbekistan, including: The Concept for the Development of Nuclear Energy in the Republic of Uzbekistan for 2019–2029, The "Roadmap" for the Transition to Low-Carbon Energy until 2050, The Laws of the Republic of Uzbekistan "On the Use of Renewable Energy Sources" (2019) and "On the Rational Use of Energy" (2020), reports and data from the Organization for Economic Cooperation and Development, UNDP, OSCE, and the national database of legislation of the Republic of Uzbekistan. The information published on the official website of the Agency for Strategic Reforms of the Republic of Uzbekistan and the website of the President of the Republic of Uzbekistan was analyzed. Analytical and scientific articles in journals were also studied. Statistical analysis made it possible to process statistical data on electricity consumption and predict future trends in the energy sector of Uzbekistan.

The use of an integrated approach, including several methods, will allow us to obtain a more complete and objective understanding of the problems and prospects of energy mix diversification in the foreign policy of Uzbekistan.

Results and Discussion

Due to the fact that the energy sector and the energy security of the state is an integral component of foreign policy, this area of research is very relevant. However, despite the relevance of this issue, there is still an insufficient number of comprehensive studies devoted to energy diversification in the foreign policy of the Republic of Uzbekistan in the context of the construction of a nuclear power plant and the transition to renewable energy sources, taking into account the interests and security of the country. One can highlight a considerable number of works by researchers dealing with the transition of the Republic of Uzbekistan to renewable energy sources and the energy security of the state. In his work, Tahirov U. provides insight into how solar panels work in Uzbekistan and talks about the country's desire to use solar energy for a greener and more sustainable future Butaboev M. touches on the topic of transition from a "brown" to a "green" economy and its features, as well as economic and environmental benefits for

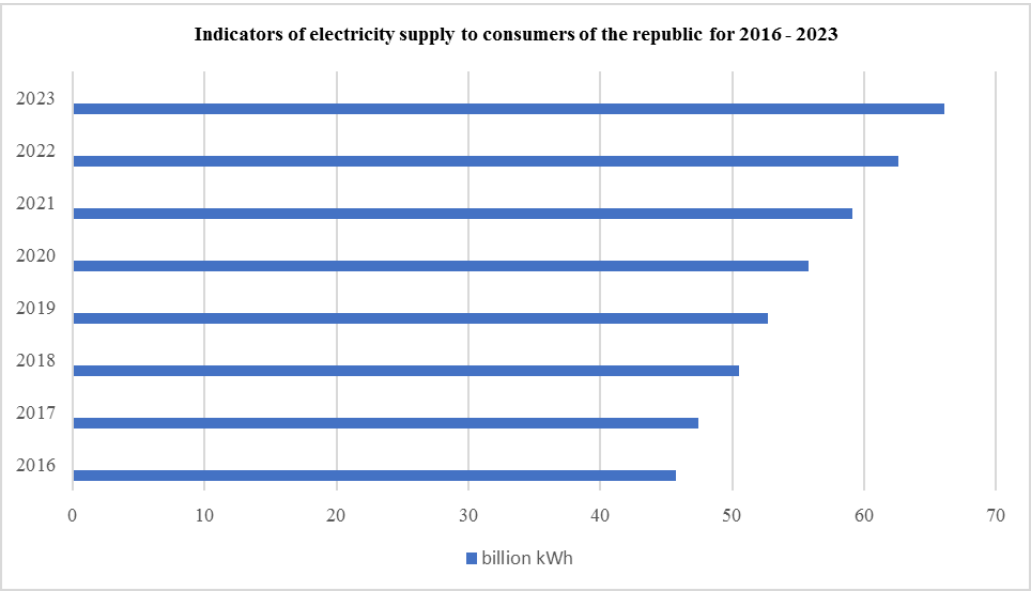
Uzbekistan. Allaeva G. analyzed the expansion of green energy opportunities and its role in the sustainable development of enterprises in the energy industry of Uzbekistan. Zokirov Sh.'s work analyzes targeted strategies for expanding the use of renewable energy sources in both Uzbekistan and other countries. Economic mechanisms have been developed to stimulate renewable energy sources in the country. Aliyeva S. in one of her articles assessed the potential for the development of solar energy in the Republic of Uzbekistan and revealed that the key feature of "green" energy in Uzbekistan, along with favorable climatic conditions, is a fairly quick return on capital investment. Another article by this author reflects the characteristics of the conditions and prospects for the implementation of "green" energy, mainly solar, in Uzbekistan. The characteristics of the directions and prospects for the implementation of projects for the use of predominantly solar energy in Uzbekistan are shown, the directions and prospects for its use are explored, and criteria for the implementation of solar and wind energy are given. The work of B. Sattarova highlights the introduction of green energy in the conditions of sustainable development of Uzbekistan. Kambarova L. considers the green economy and the transition to renewable energy sources as a desire for sustainable development of the Republic of Uzbekistan. Bakhretdinova H.'s work analyzes the impact of solar energy development on the ecology of Uzbekistan. Mustafakulov A. reviewed the possibilities of using renewable energy sources in Uzbekistan. Researchers Allaeva G. and Zakhidov R. in their works studied current problems of the energy sector and trends in its development.

An analysis of the available literature indicates the need to conduct research aimed at obtaining a more complete and objective understanding of the problems and prospects of energy mix diversification in the foreign policy of Uzbekistan, taking into account the transition to more environmentally friendly energy sources and the planned construction of a nuclear power plant in the country, in conditions of geopolitical instability.

Broadening of energy sources is the strategic process of allocating energy sources and supply routes to reduce dependence on one or more sources. For the Republic of Uzbekistan, which has significant reserves of natural gas and other natural resources, energy diversification plays a key role in both domestic and foreign policy.

The main source of energy in Uzbekistan today is natural gas, accounting for about 85% of all energy consumed. On the one hand, the abundance of natural resources creates the basis for energy security and economic development. On the other hand, high dependence on one type of fuel - natural gas - makes the country vulnerable to external and internal economic shocks, changes in world energy prices and geopolitical risks. Electricity consumption is only growing every year. According to data from the Ministry of Energy of the Republic of Uzbekistan, in 2023, 44.6% more electricity was supplied to consumers compared to 2016 (Table 1).

Table 1



(*Ministry of Energy of the Republic of Uzbekistan)

According to experts, by 2030 the demand for electricity may double due to economic development and demographic growth (by 2030 the population of Uzbekistan is expected to reach 40 million people), as well as an increase in living standards, respectively, electricity consumption in Uzbekistan by 2030 will be 120.8 billion kW/h (an increase of 1.7 times) [2]. Recently, the problem in the energy sector of Uzbekistan has become more acute, confirmed by constant power outages, heat outages and restrictions on gas consumption in Tashkent in January 2023.

In December 2017, Sh. Mirziyoyev made a decision that will accelerate the increase in electricity capacity in the region and gradually reduce the use of fossil fuels. The head of state decided to build the first nuclear power plant in the Jizzakh region, which should cover about 20% of the electricity needs of the Republic of Uzbekistan. According to the intergovernmental agreement on cooperation in the field of nuclear energy, negotiations are underway between Uzbekistan and Russian Rosatom on the construction of a nuclear power plant. The start of construction of the nuclear power plant was planned for 2022, completion is planned for 2030, according to the Concept for the Development of Nuclear Energy in the Republic of Uzbekistan for 2019-2029 [3]. However, the package of documents on financing the construction of the nuclear power plant has not yet been signed. Moreover, the government's «Road Map» for the transition to low-carbon energy for the electricity sector of Uzbekistan until 2050 makes little mention of nuclear energy. The plan mainly mentions the development of solar and wind energy. The construction of the station was initially planned using funds from the Russian state loan; later it became known that funds from the state budget of Uzbekistan would also be attracted. The project involves the construction of a

nuclear power plant with pressurized water reactors of the VVER-1200 type with a capacity of 1.2 GW/h. [4]. It is planned to put the station into operation in stages: the first power unit at the end of 2028, the second in mid-2030. The delay in construction is associated with the study of all risks and the possibility of using "dry cooling" from Lake Tuzan[5].

According to experts, the construction of nuclear power plants is not only a way to satisfy the growing demand for electricity in the region, but also a way to increase industrial potential. As reflected in the cooperation roadmaps, Uzbekistan plans to study the experience of countries that already have nuclear power plants. This is very important for Uzbekistan, since it is building its own nuclear power plant; For these purposes, a special department, the nuclear agency Uzatom, has been created [6]. In the summer of 2022, it became known about negotiations to reduce the construction budget or use small reactors, which are much safer and do not require the creation of an evacuation zone around the nuclear power plant. Also, issues regarding fuel supply have not been resolved due to logistical difficulties and disposal of radioactive waste.

The construction of a nuclear power plant is an integral part of the strategic foreign policy goal of the Republic of Uzbekistan to diversify energy sources. In the context of global changes in energy markets, as well as in order to ensure energy security, Uzbekistan seeks to reduce dependence on traditional hydrocarbon energy sources and develop alternative sources, including nuclear energy.

However, does Uzbekistan really need the construction of a nuclear power plant and are the risks and high costs of construction justified? Every year, the cost of construction is growing: in 2018, Uzbekenergo estimated construction at 10 billion US dollars, and in 2019, according to Rosatom, the cost of nuclear power plants in Uzbekistan was already estimated at 11 billion US dollars, at the same time, safety problems depend on many factors, may increase costs. All these factors make it difficult to make a final assessment of the cost of nuclear energy, but it is obvious that it is many times higher than alternative sources of electricity.

According to the World Nuclear Industry Status Report, nuclear power's share of global commercial electricity production has fallen to 9.8%, its lowest level in 40 years. To date, nuclear power plants have been built in 33 countries, but only 15 of them are developing new capacities. This confirms the decline in interest in nuclear energy and the resort of states to safer and less expensive sources, such as solar energy. For example, solar energy costs between US$16 and US$90 per mWh, while nuclear power costs around US$100 and US$130 [7]. It is precisely due to the high cost of nuclear energy, long construction times and other justified risks that solar power plants are increasing capacity faster than any other type of energy.

It is also worth noting Uzbekistan's dependence on Russia in the case of the construction of a nuclear power plant, since the Russian Federation not only provides a state loan for construction, but also must provide the station with fuel supplies and train specialists in this field. However, due to the unstable

geopolitical situation and anti-Russian sanctions, this may be unprofitable for Uzbekistan.

In addition to the already mentioned risk factors, seismic risks should also be noted, as Uzbekistan is located in a seismically active zone. The construction of a nuclear power plant requires additional safety measures. Moreover, social resistance should be taken into account, as the population of nearby areas is concerned about the environmental consequences and potential accidents. In this regard, we believe that alternative energy sources should be considered.

Global climate change and problems in the energy sector have led to the development of alternative and greener energy sources, which are known as green technologies.

Thus, the active development of solar energy generation began in Uzbekistan. Large-scale reform in the energy sector of Uzbekistan was launched in 2019. In 2019, the Laws of the Republic of Uzbekistan "On the Use of Renewable Energy Sources" and "On Public-Private Partnership" were adopted, and in 2020 the Law "On the Rational Use of Energy" was adopted in a new edition. By 2026, it is planned to increase energy efficiency throughout the republic by 20%, and by 2030 – by 1.5 times. The government also aims to reduce greenhouse gas emissions by 25% by 2026 and ensure the commissioning of 14 GW of new renewable energy facilities by 2030*[8].*

As Sh. Mirziyoyev noted: "The development of renewable energy sources is a matter of national importance for Uzbekistan" [9]. In the election campaign of the President of the country, special attention is paid to "green energy", which by 2030 should provide up to 40% of total electricity generation with a capacity of up to 25 GW. By 2050, it is planned to completely abandon the use of coal, oil products and natural gas as fuel. The state has good potential in this area, as the region has an average of 330 sunny days a year. Foreign investors from France and the UAE are actively attracted. Uzbekistan is also developing cooperation with the European Union and the United States in the field of energy. Technical assistance programs and joint projects promote technology transfer and the development of renewable energy sources in the country. One of Uzbekistan's key partners in the field of energy is China. As part of the One Belt, One Road initiative, China is actively investing in Uzbekistan's energy infrastructure, including the construction of solar power plants. These investments support the development of renewable energy sources and reduce dependence on natural gas. In total, it is planned to attract about 2 billion US dollars for these purposes. The Department of Energy has identified 33 areas to install solar panels for 150,000 households. Work is planned from 2021 to 2032. Supplying electricity to the most remote areas will help develop decentralized energy throughout the country [10].

In 2022, one of the first solar power plants, developed by the French company Total Eren, was launched near the city of Samarkand. The farm generates approximately 270,000 kWh per year, supplying electricity to 140,000 households. In total, since the beginning of 2022, 7 power plants with a capacity of 1.5 thousand megawatts have been launched. It is also planned to complete 11 large projects with a capacity of 4.5 thousand megawatts. As stated in the

Presidential Address of December 2022, it is planned to build solar and wind power plants in Bukhara, Jizzakh, Kashkadarya, Navoi, Samarkand, Fergana and Tashkent regions. This will generate an additional 14 billion kilowatts of electricity, increasing the supply of electricity to households by 50 percent. By 2025, it is planned to install solar panels in all government organizations. For this purpose, investments in the amount of $2 billion will be attracted. Due to this, 60 percent of electricity and gas consumption will be transferred to "green energy". At the same time, the use of small plants powered by renewable energy sources will be significantly expanded [11].

In March of this year, the President of the country signed the Resolution "On measures to implement the Clean Energy for Buildings project in Uzbekistan with the participation of the World Bank." The state received a loan from the World Bank in the amount of $143 million to provide all social facilities in Uzbekistan with devices powered by renewable energy sources. The project is scheduled to be completed in 2028. In February of this year, a Presidential Decree was signed on measures to accelerate the implementation of renewable energy sources and energy-saving technologies in 2023[12]. These Resolutions have created favorable conditions for investment and the transition to renewable energy sources. Support mechanisms include government subsidies, benefits, green certificates, tax exemptions, etc. For convenience, the state has launched a platform on which you can purchase solar panels and water heaters in installments or with compensation from the state for a one-time payment.

Since 2023, a market for "green certificates" has been introduced. Small and medium-sized businesses are switching to solar energy. The "Green" certification system is a means of accounting and monitoring the production and consumption of electricity based on renewable energy sources [13]. One green energy certificate confirms the production of 1000 kWh of electricity using renewable energy sources. Certificates may be transferred to third parties. Income from the sale of green energy certificates is exempt from income tax [14].

By 2026, it is planned to increase electricity production by an additional 30 billion kilowatt-hours, reaching a total generating capacity of 100 billion kilowatt-hours, and also reduce natural gas consumption to three billion cubic meters, thanks to an increase in the share of renewable energy sources to 25 percent.

Thus, the development of solar energy is an excellent alternative to natural gas. According to the World Bank, the development of green energy will help reduce the import of fossil fuels, thereby lowering costs for importing countries. For example, Uzbekistan could save $67 billion by 2060. The development of green energy will make it possible to get rid of the construction of expensive long power transmission lines to hard-to-reach remote settlements.

In general, as the experience of other countries shows, the development of green energy is very important for the development of the state as a whole, since it is the most environmentally friendly type of energy generation that does not harm the ecology and environment, the healthy development of the population and the future generation.

One of the key directions in the development of Uzbekistan's national energy system, based on the rational use of water resources, is hydropower. The country operates several hydroelectric power plants (HPPs), with the largest being the Charvak, Farhad, and Andijan HPPs, which generate a significant share of renewable energy.

In recent years, the government of Uzbekistan has been actively attracting foreign investments and developing new small and medium-sized HPP projects to enhance energy security and reduce dependence on fossil fuels. However, the potential of hydropower in Uzbekistan remains underutilized. One of the priority tasks is the modernization of existing power plants using advanced technologies, which will improve their efficiency and reduce environmental impact. Additionally, the construction of small HPPs presents a promising opportunity, as they are more environmentally friendly and require lower investments compared to nuclear power plants.

The development of regional energy integration—strengthening cooperation within the Central Asian energy market, including the creation of a unified energy system—will help optimize electricity supply. Tajikistan and Kyrgyzstan possess significant hydropower potential, which, in turn, could expand electricity imports and further enhance regional energy security.

Meanwhile, nuclear issues in Uzbekistan entered a new stage during the state visit of Russian President V. Putin to Tashkent. Following the visit, it was announced that a decision had been made to build a small nuclear power plant in Uzbekistan. Thus, the question about this project, which was kept at the level of rumors and vague discussions both at the official level and among the expert community, acquired more specific outlines and content: the nuclear power plant will be built. This decision caused different reactions in society. On social networks, one can observe a surge of emotions and indignation in connection with this decision. The range of critical reactions to nuclear power plants ranges from environmental, economic, technical and financial arguments to geopolitical ones.

As can be seen from this, the problem of constructing a nuclear power plant is not just an energy issue, but a more complex and unique issue that requires a broad public discourse. It is appropriate to mention in this regard that this problem is also being discussed in Kazakhstan and judging by reports, this issue will be put to a referendum and if the decision is positive, a tender will be organized among several possible nuclear power plant construction companies. Moreover, Kazakhstan has a more developed hydropower system, which reduces the urgent need for nuclear energy. Kazakhstan is also actively developing renewable energy sources (wind and solar power), which has helped decrease dependence on coal.

Thus, the Kazakhstani experience demonstrates that comprehensive public discussions are crucial before constructing a nuclear power plant. Additionally, the development of renewable energy and hydropower can serve as an alternative to the costly construction of nuclear power plants.

A comparative analysis of energy diversification strategies in other countries can be found in Table 2.

Table 2 Comparative Analysis of Energy Diversification Strategies

Country	Main Strategy	Key Advantages	Key Disadvantages
Uzbekistan	Combined approach: development of renewable energy sources (RES), construction of nuclear power plants (NPP), infrastructure modernization	- High potential for solar energy • Government support for RES • Reduced dependence on natural gas	• High costs and long construction periods for NPP • Dependence on imported technologies and fuel
Kazakhstan	Development of RES, potential construction of NPP (under consideration via referendum)	- Active development of RES (especially wind energy) Broader public discussions before decision-making	• - High dependence on coal-fired power plants • Underdeveloped small-scale hydropower
France	Reliance on nuclear energy (over 70% of total electricity production)	- Energy independence Low CO_2 emissions	• - Expensive waste disposal • Growing public concern
Germany	Transition to RES («Energiewende»), phase-out of NPP	- Rapid development of solar and wind energy Reduced dependence on fossil fuels	• - High transition costs • Challenges in ensuring energy system stability
Iran	NPP + hydropower + solar energy	- Well-developed hydropower • Operating NPP (Bushehr) High potential for solar energy	• - Political sanctions limit access to technology • High costs of nuclear energy

Conclusion

In Uzbekistan, over the past few years, steps have been actively taken towards resolving issues regarding electricity shortages and periodic interruptions in its supply. Diversification of energy sources is a source of security for the country. History has repeatedly proven that dependence on imports of a single energy source sometimes leads to negative social, political and economic consequences for a country[15]. Thus, summarizing the above, we can identify the following factors affecting energy security and risks:

- demographic growth

- terrorist attacks
- unstable geopolitical situation, political coups, sanctions
- natural disasters and catastrophes
- insufficient investment
- insufficient development of infrastructure, industrial accidents, high wear and tear of equipment and untimely renewal of infrastructure.

In turn, you should pay attention to the positive and negative aspects of nuclear power plant construction:

- meeting 20% of the required amount of electricity consumed
- high cost of nuclear power plant construction, long construction period, payback period unknown
- all aspects and all possible risks have not been fully studied, seismically active region, proximity to the border with Kazakhstan (40 km)
- lack of experience in the construction and operation of nuclear power plants, lack of qualified personnel, dependence on the Russian Federation
- a fuel supply strategy has not been developed due to logistics difficulties and radioactive waste disposal.

At the same time, it is necessary to emphasize the positive and negative aspects of the development of green energy:

- providing up to 40% of total electricity generation with a capacity of up to 25 GW by 2030
- economically beneficial: a large number of sunny days per year, relatively low costs for the construction of solar farms, speed of construction, quick payback
- attracting private investment
- Environmentally friendly, reducing negative impact on the environment
- state support: allocation of subsidies from the state, benefits, green certificates, tax exemptions, etc.
- sale of surplus electricity without taxation
- construction of expensive long power transmission lines to hard-to-reach remote settlements.

Additionally, one of the key challenges facing Uzbekistan in its quest for energy diversification is the lack of infrastructure and technology to harness renewable energy sources. The country has limited experience in developing renewable energy projects and faces obstacles such as high upfront costs and a shortage of skilled labor. To overcome these challenges, Uzbekistan will need to attract foreign investment and expertise to create a competitive renewable energy sector.

Uzbekistan should take into account the experience of other countries. The Kazakh experience demonstrates that before constructing a nuclear power plant, it is essential to consider public opinion and actively develop renewable energy sources. The Iranian example shows that a combination of nuclear and hydropower can be sustainable but requires significant investments. The French model confirms the efficiency of nuclear power plants but also highlights their long-term costs. The German path proves that transitioning to renewable energy is possible but requires substantial investments and grid modernization.

However, despite all the problems facing the Republic of Uzbekistan in the field of broadening of energy sources, Uzbekistan's foreign policy is aimed at the active development of solar energy through international cooperation and attracting investment. This not only helps to improve the environmental situation and sustainable development of the country, but also strengthens its position in the international arena. Uzbekistan provides an example of successful integration of national and international efforts in the field of renewable energy, which can serve as a model for other developing countries.

Thus, it is extremely important for the Republic of Uzbekistan to use the potential of solar energy generation. It is the development of this type of alternative energy sources that should be emphasized. The use of solar energy will lead to a high economic effect, reduced negative impact on the environment and sustainable development of the state. These measures will not only help reduce carbon dioxide emissions, but will also increase the energy independence of the Republic of Uzbekistan. At the same time, the country must build on existing energy partnerships with neighboring countries and international partnerships to ensure a stable and sustainable energy future. By addressing these challenges, Uzbekistan can pave the way to a safer and more sustainable energy system that will benefit both its economy and the environment. At the same time, it is necessary to continue reforms and attract investments to modernize infrastructure and achieve the goals set to reduce emissions and increase the share of green energy.

In conclusion, energy diversification is a complex issue that requires careful planning and cooperation both domestically and internationally. However, the interests of the state should be taken into account and strive to strengthen energy independence and security.

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ӨЗБЕКСТАН РЕСПУБЛИКАСЫНЫҢ СЫРТҚЫ САЯСАТЫНДАҒЫ ЭНЕРГИЯНЫ ӘРТАРАПТАНДЫРУ ПРОБЛЕМАСЫ

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Аңдатпа. Ш.Мирзиеевтің билікке келуімен Өзбекстан Республикасы өзінің сыртқы саясатын белсенді түрде дамыта бастады, өзара тиімді халықаралық ынтымақтастықты кеңейте бастады, шетел инвестицияларын тартуға тырысты, елдің экономикалық және саяси қауіпсіздігін нығайта бастады. Энергияны әртараптандыру Өзбекстан Республикасының сыртқы саясатындағы маңызды мәселелердің бірі болып табылады. Мемлекет импортқа тәуелділікті азайту және өзінің энергетикалық қауіпсіздігін жақсарту үшін энергия көздерін әртараптандыру қажеттігін мойындады. Соңғы бірнеше жылда үкімет күн энергиясы сияқты жаңартылатын энергия көздерін дамыту бойынша шаралар қабылдауда. Жасыл энергетикалық жобаларға инвестиция салу арқылы Өзбекстан Республикасы көмірқышқыл газының шығарындыларын азайтуға және қазба отындарына тәуелді емес тұрақты энергетика жүйесін құруға ұмтылуда. Бұл ретте келіссөздер жүргізіліп, атом электр станциясын салу бойынша жұмыстар басталып кетті.

Мақаланың мақсаты – Өзбекстан Республикасының энергетикалық қауіпсіздікті қамтамасыз етуге бағытталған сыртқы саясатының негізгі аспектілерін, сондай-ақ осы үдерістегі халықаралық ынтымақтастықтың рөлін талдау. Баламалы және неғұрлым экологиялық энергия көздерін зерделеуге және Өзбекстан Республикасының аумағында атом электр станциясын салу мәселелеріне ерекше назар аударылады. Қорытындылай келе, осы екі энергия көзінің оң және теріс жақтары берілген. Сонымен қатар, ұсынымдар берілді, соның арқасында мемлекет өзінің энергетикалық тәуелсіздігі мен қауіпсіздігін нығайтады, сондай-ақ елдің тұрақты дамуына қадам жасайды.

Энергияны әртараптандыру ел ішінде де, халықаралық деңгейде де мұқият жоспарлауды және ынтымақтастықты талап ететін күрделі мәселе болса да, зерттеу нәтижелері Өзбекстан Республикасында энергияны әртараптандырудың дамып келе жатқанын көрсетеді.

Тірек сөздер: сыртқы саясат, Өзбекстан Республикасы, күн энергиясы, атом электр станциясы, энергетикалық қауіпсіздік, энергетикалық әртараптандыру, энергия көздері, Ш. Мирзиеев

Қаржыландыру: Мақаладағы зерттеу AP23483774 «Түркі интеграциясын тереңдету: Қазақстан үшін перспективалар, геосаяси тәуекелдер мен қауіптер» атты жоба аясында ҚР Ғылым және жоғары білім министрілігінің гранттық қаржыландыруымен жүзеге асырылды.

ПРОБЛЕМА ЭНЕРГЕТИЧЕСКОЙ ДИВЕРСИФИКАЦИИ ВО ВНЕШНЕЙ ПОЛИТИКЕ РЕСПУБЛИКИ УЗБЕКИСТАН

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Аннотация. С приходом к власти Ш. Мирзиеева Республика Узбекистан стала активно развивать свою внешнюю политику, расширяя взаимовыгодное международное сотрудничество, стремясь привлечь иностранные инвестиции, укрепляя как экономическую, так и политическую безопасность страны. Диверсификация энергетики является одним из важнейших вопросов внешней политики Республики Узбекистан. Государство признало потребность в диверсификации своих источников энергии с целью уменьшения зависимости от импорта и повышения своей энергетической безопасности. В последние несколько лет правительство предпринимает шаги по продвижению возобновляемых источников энергии, таких как солнечная энергия. Инвестируя в проекты зеленой энергетики, Республика Узбекистан стремиться сократить выбросы углекислого газа и создать более устойчивую энергетическую систему, менее зависимую от ископаемого топлива. В то же время ведутся переговоры и начата работа по строительству атомной электростанции.

Целью статьи является анализ основных аспектов внешней политики Республики Узбекистан, направленных на обеспечение энергетической безопасности, а также роль международного сотрудничества в этом процессе. Отдельное внимание уделяется изучению альтернативных и более экологичных источников энергии и вопросам строительства атомной электростанции на территории Республики Узбекистан. В заключении приводятся как положительные, так и отрицательные стороны этих двух источников энергии. Наряду с этим были даны рекомендации, благодаря которым, государство укрепит свою энергетическую независимость и безопасность, а также предпримет шаг к устойчивому развитию страны.

Несмотря на то, что энергетическая диверсификация является сложной проблемой, которая требует тщательного планирования и сотрудничества как внутри страны, так и на международном уровне, результаты исследования свидетельствуют о развитии энергетической диверсификации в Республики Узбекистан.

Ключевые слова: внешняя политика, Республика Узбекистан, солнечная энергия, АЭС, энергетическая безопасность, энергетическая диверсификация, источники энергии, Ш. Мирзиеев

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