RENEWABLE ENERGY CAPACITY OF UZBEKISTAN: OPPORTUNITIES AND PROBLEMS OF THE GREEN ECONOMY

Khodjayev Anvar Rasulovich
Bukhara State University;
Teacher of the "Economics" department
Anikkhodja1989@gmail.com

Abstract: *Uzbekistan has a huge potential in the field of renewable energy sources, especially in the field of solar, wind and hydropower. Developing these resources can pave the way for a sustainable and green economy, providing many opportunities for economic growth, energy security and climate change.*

Key words: *Hydropower; Green economy;*

Аннотация: *Узбекистан обладает огромным потенциалом в области возобновляемых источников энергии, особенно в области солнечной, ветровой и гидроэнергетики. Освоение этих ресурсов может проложить путь к устойчивой и «зеленой» экономике, предоставляя множество возможностей для экономического роста, энергетической безопасности и борьбы с изменением климата.*

Ключевые слова: *гидроэнергетика; Зеленая экономика;*

Due to the global challenges of climate change and the need to transition to a sustainable future, renewable energy sources have emerged as a key solution. Uzbekistan, rich in natural resources and sunlight, has great potential for the development of renewable energy. This article examines the opportunities and problems of using renewable energy sources in Uzbekistan and shows its role in building a green economy.

Uzbekistan is distinguished by renewable energy sources, in particular solar and wind energy. Our country experiences about 300 sunny days per year, making it an ideal location for solar energy projects. Vast areas of flat and arid land provide ample space for installing solar panels. Similarly, mountainous regions and open plains provide favorable conditions for wind energy generation.

Solar energy: solar potential of Uzbekistan

The solar energy potential of Uzbekistan is very large. The country receives an average of 5 to 6 kW/m² of solar radiation per day, which is comparable to many solar-rich regions of the world. The implementation of large-scale solar photovoltaic (PV) plants and the promotion of rooftop solar installations can significantly increase the country's energy needs, while reducing its dependence on fossil fuels.

Wind Energy: Harnessing the power of the wind

The wind energy potential of Uzbekistan is great, especially in the mountainous regions of Navoi and Bukhara. These areas experience consistent wind speeds that provide a favorable environment for the installation of wind turbines. The use of wind energy makes it possible to diversify the country's energy complex, reduce greenhouse gas emissions and create new economic opportunities.

Hydropower: use of water resources

Uzbekistan also has great hydropower potential. The country has many rivers and reservoirs, such as Amudarya and Syrdarya, which can be used for clean energy production. Proper planning and sustainable management of water resources are critical to the successful development of hydropower projects, ensuring minimal impacts to ecosystems and downstream users.

Problems in the development of renewable energy sources:

Despite the significant potential of renewable energy sources, Uzbekistan faces a number of problems in using these resources at full capacity.

Policy and regulatory framework: Further development of a comprehensive existing legal and regulatory framework for renewable energy will drive development in the renewable energy sector. We believe that the government should develop

existing incentives and regulations to attract investment and promote the growth of renewable energy projects.

Financing and Investment: Securing adequate financing and investment for renewable energy projects remains a challenge. Financial institutions and investors need to ensure that they receive stable and attractive returns on their investments, which requires the implementation of favorable mechanisms such as tariffs, power purchase agreements and tax incentives.

Infrastructure Development: The development of renewable energy infrastructure, including transmission and distribution networks, is essential to ensure the seamless integration of renewable energy into the existing electricity grid. Upgrading infrastructure requires significant investment and careful planning.

Technical and human capacity: Building technical expertise and human capacity in renewable energy is critical. Investments in education and training programs can equip the workforce with the necessary skills to effectively develop, operate, and maintain renewable energy projects.

Opportunities for a green economy

Overcoming these problems will create great opportunities for the green economy of Uzbekistan.

Energy security and independence: The development of renewable energy sources increases energy security by diversifying the energy mix and reducing dependence on fossil fuel imports. It also provides opportunities for energy independence and self-sufficiency.

Job creation and economic growth: The renewable energy sector has the potential to create many jobs, from project development and construction to operations and maintenance. In addition, investments in renewable energy sources stimulate economic growth, attract foreign investment and stimulate technological innovation.

Environmental benefits and climate action: Switching to renewable energy sources reduces greenhouse gas emissions, improves air quality and reduces the

ecological footprint. Uzbekistan's commitment to global climate action can be demonstrated by using renewable energy as a key component of its national energy strategy.

In conclusion, we can say that Uzbekistan has a huge potential in the field of renewable energy sources, especially in the field of solar, wind and hydropower. Developing these resources can pave the way for a sustainable and green economy, providing many opportunities for economic growth, energy security and climate change. To unlock this potential, Uzbekistan needs to address policy and regulatory issues, financing and investment, infrastructure development, and capacity building. By using renewable energy, Uzbekistan can show itself as a regional leader in sustainable development and contribute to global efforts in the fight against climate change.

REFERENCE LITERATURE

1. Qulliyev O. ISHLAB CHIQARISH IMKONIYATLARI CHIZIG'I //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2020. – Т. 1. – №. 1.
2. Qulliyev O., Abduqahhorov B. ECONOMIC GLOBALIZATION //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2020. – Т. 2. – №. 2.
3. Qulliyev O. PUL MABLAG'LARI HISOBI: IQTISODIYOTDAGI O'RNI VA ULARNING ASOSIY VAZIFALARI //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2020. – Т. 2. – №. 2.
4. Qulliyev O. ЛИНИЯ ВОЗМОЖНОСТЕЙ ПРОИЗВОДСТВА //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2020. – Т. 2. – №. 2.
5. Qulliyev O. Covid-19 и экономика Узбекистана //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2020. – Т. 2. – №. 2.
6. Qulliyev O. ПРИНЦИПЫ ФУНКЦИОНИРОВАНИЯ И ОСНОВНЫЕ НАПРАВЛЕНИЯ ДЕЯТЕЛЬНОСТИ МНОГОСТОРОННИХ БАНКОВ //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). – 2020. – Т. 2. – №. 2.

7. Khodjayev A. R. et al. Efficiency of using modern information and communication technologies in small business //World science: problems and innovations. – 2021. – С. 130-132.

8. Khodjayev A. R., Amonov M. T. Bio-economy is a new direction of development and one of the anti-crisis mechanisms //ЭКОНОМИКА И СОВРЕМЕННЫЙ МЕНЕДЖМЕНТ: ТЕОРИЯ, МЕТОДОЛОГИЯ, ПРАКТИКА. – 2021. – С. 112-115.

9. Khodjayev A. R. et al. HUMAN CAPITAL AND ITS IMPACT ON ECONOMIC GROWTH //SCIENCE AND TECHNOLOGY RESEARCH 2022. – 2022. – С. 75-78.

10. Rasulovich K. A. The role of agro-tourism in the development of socio-economic infrastructure in rural areas //Наука и образование сегодня. – 2021. – №. 3 (62). – С. 13-14.

11. Rasulovich K. A., Tuymuratovich A. M. Efficiency of formation of franchise in small business development //Наука и образование сегодня. – 2021. – №. 9 (68). – С. 39-42.

12. Rasulovich K. A., Ulugbekovich K. A. Section: economics //Polish science journal. – 2020. – С. 25.

13. Rasulovich K. A., Tuymuratovich A. M. Legalization of steps to eliminate the harmful effects of cryptoma in the economy //ACADEMICIA: An International Multidisciplinary Research Journal. – 2022. – Т. 12. – №. 4. – С. 651-654.

14. Xodjayev A. et al. The role of smm marketing in small business development during a pandemic //Центр научных публикаций (buxdu. uz). – 2020. – Т. 1. – №. 1.

15. Khodjayev A. R., Amonov M. T. Bio-economy is a new direction of development and one of the anti-crisis mechanisms //Экономика и современный менеджмент: теория, методология, практика. – 2021. – С. 112-115.

16. Rasulovich K. A., Zokirovich K. M. Market Economy and its Emergence //" ONLINE-CONFERENCES" PLATFORM. – 2023. – С. 47-52.

17. Khodjayev A. R. et al. HUMAN CAPITAL AND ITS IMPACT ON ECONOMIC GROWTH //SCIENCE AND TECHNOLOGY RESEARCH 2022. – 2022. – С. 75-78.

18. Rasulovich K. A. AN ENGINE IN THE NEW AGE OF DEVELOPMENT OF THE DIGITAL ECONOMY //Economics. – 2022. – №. 1 (51). – С. 70-74.