

INVESTMENTS IN SUSTAINABLE DEVELOPMENT AND “GREEN”
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Abstract: The article examines trends and prospects of investing in sustainable development and the implementation of “green” technologies at enterprises in Uzbekistan. Special attention is given to the analysis of the current state of environmental policy, the promotion of environmentally friendly production, and the role of government programs in supporting “green” initiatives. Economic and environmental benefits of transitioning to renewable energy sources, energy-efficient technologies, and reducing the negative impact of industry on the environment are studied. Using examples of specific enterprises, barriers and factors for the successful integration of sustainable practices are identified. The paper emphasizes the need for further investments and the development of legislation to enhance the competitiveness of Uzbek enterprises amid the global ecological transformation.

Introduction

In recent decades, sustainable development and “green” technologies have become key factors for economic growth and enterprise competitiveness worldwide. Considering global challenges related to climate change, resource depletion, and environmental degradation, enterprises must transition to more environmentally responsible and resource-efficient production models. For developing economies such as Uzbekistan, the implementation of “green” technologies opens new opportunities for attracting investments, modernizing industry, and improving resource efficiency. Amid the implementation of national programs for sustainable development and transition to a “green” economy, issues of investment in environmentally friendly technologies and practices become urgent and require comprehensive study. The introduction of modern “green” solutions at Uzbek enterprises contributes not only to improving the ecological situation but also to strengthening economic stability, creating new jobs, and improving the population’s quality of life. The international community actively promotes environmental standards and sustainable development goals enshrined in documents such as the Paris Agreement on climate and the UN Agenda 2030. For developing countries, including Uzbekistan, integration into international environmental initiatives is an important factor in attracting foreign investments and increasing competitiveness in the global market.

This work aims to study the current state of investments in sustainable development and “green” technologies at enterprises in Uzbekistan in the context of international trends, analyze barriers and prospects of their integration, and develop recommendations to improve policies and practices in this area.

The Role of Investments in Sustainable Development and “Green” Technologies at Enterprises in Uzbekistan

Amid global environmental challenges and increasing international pressure to reduce carbon footprints, investments in sustainable development and “green” technologies are acquiring strategic importance for enterprises in Uzbekistan. These investments contribute not only to improving the country’s environmental situation but also to creating competitive advantages in domestic and international markets.

Economic Effect and Increased Efficiency

Investments in “green” technologies enable enterprises to significantly reduce costs for energy and raw materials through the adoption of energy-efficient technologies, the use of renewable energy sources, and optimization of production processes. This leads to lower production costs and improved overall economic efficiency. In the long term, such investments enhance business resilience to external economic and environmental risks, which is especially important for enterprises amid global market instability and climate change.

Environmental Safety and Improved Quality of Life

Industry has traditionally been one of the main sources of environmental pollution. The implementation of “green” technologies at Uzbek enterprises helps reduce greenhouse gas emissions, decrease the discharge of harmful substances into the atmosphere and water bodies, and promotes rational use of natural resources. This not only contributes to fulfilling the country’s international environmental obligations but also improves the quality of life for the population by reducing health risks and the ecological impact of industrial activity.

Socio-Economic Development and Job Creation

The development of sustainable production is closely linked to innovation and technological progress. Investments in “green” technologies facilitate the creation of new jobs in high-tech and environmentally focused sectors, which stimulates socio-economic development in the regions. They contribute to the formation of a skilled workforce and the growth of small and medium-sized businesses in the “green” economy sector, creating additional value for society.

Integration into International Environmental and Economic Processes

In the context of economic globalization and growing international attention to sustainable development issues, enterprises implementing “green” projects gain access to foreign markets and international investments. Uzbekistan actively cooperates with international organizations such as the World Bank, Asian Development Bank, and the European Bank for Reconstruction and Development, which provide financing and technical support for environmentally oriented projects. This not only attracts external investments but also raises the level of technological development and compliance with international standards.

Support for National Strategies and Government Initiatives

The role of investments in “green” technologies is inseparably linked to Uzbekistan’s national sustainable development programs and environmental policies. The government

creates a regulatory framework and stimulates the adoption of renewable energy, energy-efficient solutions, and resource-saving technologies through incentives, subsidies, and tax preferences. Investments in this sector help achieve the country's strategic goals of reducing environmental impact and ensuring sustainable economic growth. For the successful development of the "green" economy and attracting investments in sustainable development, a clear and supportive legislative framework is critically important. In recent years, Uzbekistan has been adopting and improving regulatory acts aimed at regulating environmental safety, encouraging the implementation of "green" technologies, and supporting environmentally responsible businesses.

- Law of the Republic of Uzbekistan "On Nature Protection."

This law is the fundamental document regulating relations in the field of nature protection, rational use of natural resources, and prevention of environmental pollution. An important aspect is the promotion of the introduction of innovative environmentally friendly technologies and equipment.

- Law "On the Use of Renewable Energy Sources."

This law is aimed at developing and stimulating the use of renewable energy sources (RES), such as solar, wind, and hydro energy. It establishes the legal framework for attracting investments in RES projects and regulates mechanisms of state support, including benefits, subsidies, and guarantees.

- Law "On Energy Saving, Its Rational Use, and Improving Energy Efficiency."

This document aims to encourage energy-efficient activities in enterprises, including obligations to implement energy-efficient technologies and equipment, conduct energy audits, and introduce energy efficiency standards.

- Law "On Investments and Investment Activities."

This law contains provisions on state support measures to create a favorable investment climate, stimulate investments in the creation of new competitive and innovative, export-oriented and/or import-substituting productions, as well as expansion and modernization of existing enterprises with the use of modern technologies and the introduction of advanced management practices.

State Programs and Strategies

- Strategy "Uzbekistan – 2030."

The strategy reflects the main directions of state policy to ensure a balance between economic development and environmental preservation. Key directions include a significant increase in the share of renewable energy sources (up to 40% by 2030), development of the green certificates market and eco-labeling, improvement of energy efficiency in the residential sector and industry, complete transition of urban transport to environmentally friendly fuels, as well as reducing greenhouse gas emissions by 30% by 2030 compared to 2010 levels.¹

¹ "Uzbekistan – 2030" Strategy, approved by the Decree of the President of the Republic of Uzbekistan, dated September 11, 2023. № YTI-158.

- Program of Measures for Further Development of Renewable Energy, Improvement of Energy Efficiency in Economic Sectors and Social Sphere for 2017–2021. Within this program, further development of the republic's hydroelectric potential is planned based on the construction of 42 new and modernization of 32 existing hydroelectric power plants, with an expansion of the capacity of environmentally clean hydro energy by 1.7 times by 2025.²

- Strategy for the Transition of the Republic of Uzbekistan to a “Green” Economy for 2019–2030.

This strategy aims to achieve a balance between economic development and environmental protection. The document provides for deepening structural reforms, modernization and diversification of industries, improving energy efficiency, expanding the use of renewable energy sources, and implementing green technologies. The main tasks include attracting green investments, implementing pilot projects, developing educational programs, and mitigating the ecological crisis in the Aral Sea region. Collectively, these efforts are intended to ensure the rational use of natural resources, reduce greenhouse gas emissions, and create “green” jobs.³

- The Role of Regulatory and Support Authorities

In Uzbekistan, specialized government bodies such as the Ministry of Energy, the Ministry of Ecology, Environmental Protection and Climate Change of the Republic of Uzbekistan, and the National Agency for Energy Efficiency operate to ensure compliance with environmental regulations. They also provide methodological and financial support to enterprises implementing “green” projects.

- Prospects for Legislative Development

Legislation in the field of sustainable development and environmental investments continues to be improved in line with international standards and recommendations. Further implementation of “green” financing mechanisms, the creation of favorable conditions for “green” bonds, and the development of an environmental audit system are planned.

Analytical Data on Investments in Sustainable Development and “Green” Technologies at Enterprises in Uzbekistan

Over the past five years, Uzbekistan has seen steady growth in investments in sustainable development and “green” technologies. In recent years, the country has made significant efforts to address environmental challenges. Uzbekistan received USD 7.5

² «Program of Measures for the Further Development of Renewable Energy, Improvement of Energy Efficiency in the Economic Sectors and Social Sphere for 2017–2021», approved by the Decree of the President of the Republic of Uzbekistan dated May 26, 2017.. № IIII-3012.

³ Strategy for the Transition of the Republic of Uzbekistan to a “Green” Economy for the Period 2019–2030, approved by the Decree of the President of the Republic of Uzbekistan dated October 4, 2019.. № IIII-4477.

million in “carbon financing” for emission reductions⁴ and is implementing a large-scale nationwide program called “Yashil Makon” (“Green Space”).⁵

Under the nationwide “Yashil Makon” program, it is planned to plant 200 million trees and shrubs annually until 2030.

In the global environmental ranking published by The Environmental Performance Index, Uzbekistan ranks 106th.

As of 2024, nine solar and wind power plants with a total capacity of 1.6 GW, rooftop solar panels with a capacity of 457 MW, and several small hydropower plants with a capacity of 183 MW have been put into operation. This has enabled the additional generation of 5 billion kWh of electricity and saved 1.5 billion cubic meters of gas.

As of October 2024, nine photovoltaic power plants and one wind farm with a total capacity of 2.7 GW are operational. Six of these started working at the end of December 2023. Investors plan to build several more “green” energy facilities.⁶

Additionally, in 2024, a three-year program was launched to build large capacities in the renewable energy sector. By 2027, it is planned to commission 28 large solar and wind power plants with a total capacity of 8 GW, construct 944 km of power transmission lines, six large substations, and 18 energy storage facilities with a total capacity of 2.2 GW.⁶

Impact of International Financial Institutions

International organizations play a significant role in attracting capital and developing Uzbekistan’s “green” economy. In 2024, the European Bank for Reconstruction and Development (EBRD) invested a record €938 million (USD 960 million) in Uzbekistan, signing 34 projects.⁷

A sovereign loan from the EBRD of USD 66.4 million to the company “National Electric Networks of Uzbekistan” will support the construction of a 230 km, 500 kV power transmission line in the Navoi region. This project will help eliminate network bottlenecks and reduce power outages, as well as facilitate the integration of renewable energy sources.⁸

Nearly USD 6 billion in foreign direct investment has been attracted to the development of green energy within a short period. “Electricity production volume increased from 59 to 82 billion kWh. In the next five years, this figure will exceed 120 billion, with the share of green energy reaching 54%.”⁸

Despite positive dynamics, there are issues that need to be addressed for further sector development, including shortages of qualified personnel, weak digitalization of environmental processes, and insufficient integration of science and technology into industry practices. Overcoming these barriers requires systematic government support, institutional reforms, and active international cooperation.

Conclusion

⁴ <https://www.vsemirnyjbank.org/> // World Bank– 21.06.2024.

⁵ <https://www.uzbekistan.org.ua/> // Embassy of the Republic of Uzbekistan in Ukraine. – 05.06.2023.

⁶ <https://www.spot.uz/ru/2024/10/21/green-electricity/>

⁷ <https://www.gazeta.uz/ru/2025/01/17/ebird/>

⁸ Speech of President Sh.M. Mirziyoyev at the Tashkent Investment Forum in 2025.

Investments in sustainable development and the implementation of “green” technologies are becoming a key element in transforming Uzbekistan’s economy amid global climate pressures and the pursuit of carbon neutrality. The adoption of renewable energy sources, environmentally clean production, sustainable agriculture, and water purification systems lays a solid foundation for enhancing the country’s resource efficiency and environmental safety.

Thus, the development of green investments in Uzbekistan is not only an environmental necessity but also an economic opportunity that opens the way to sustainable growth, expansion of export potential, and improvement in the population’s quality of life.

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