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International Journal of Economic Perspectives, 17(11) 78-84

ISSN: 1307-1637 UGC CARE GROPU II

Retrieved from https://ijeponline.com/index.php/journal

FINANCING GREEN PROJECTS BASED ON PUBLIC-PRIVATE PARTNERSHIPS

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Abstract

This article focuses on the important aspects of public-private partnership in the development of "green" economy. The concept of "green" economy, its essence has been revealed, it is based on the importance of introducing "green" technologies, which allow the transition from a wasteful business model to an environmentally friendly model. The main directions for the development of the "green" economy, which is widespread in most countries, including Uzbekistan, have been defined

Keywords: *Green Financing, Public-Private Partnership, Green Energy, Banking And Financial Products, Green Bonds.*

INTRODUCTION

The expediency of using the public-private partnership mechanism in the transition to the "green" economy model is proven by the experience of developed and developing countries. The problems of environmental protection and implementation of ecological projects are primarily related to the lack of both state funds and financial resources of private business. Today, public and private sector cooperation forms an effective mechanism for attracting investments aimed at ensuring "green" growth of the economy. Also, Public -Private Partnerships aimed at "green" growth of the economy Three main sectors have the largest share in the implementation of PPP projects: - energy based on renewable sources; - water supply and sewerage; - solid household waste processing. It is in these areas that the main financial support for investment projects around the world is allocated by the World Bank structures.

By actively introducing "green economy" technologies in all sectors in our country, by 2026, we will increase the energy efficiency of the economy by 20% and reduce the amount of harmful gases released into the air by 20%, by directing the funds of international financial institutions and other "donor" organizations that finance the projects of the transition to the "green" economy¹. projects are being financed.

Today, the world's population is more than 8 billion. There are forecasts of the United Nations that the world's population will reach 9.7 billion in 2050, and 11 billion by 2100. As a result, while the amount of resources is decreasing, the needs, which are considered the main problem of the economy, continue to grow regularly, that is, the scope of the main problem of the economy is expanding more and more. In line with this, the range of problems related to climate change in the world continues to expand. As a result, on the other hand, the scope of food safety problems is also expanding.

¹No. PF-60 of the President of the Republic of Uzbekistan dated January 28, 2022 "On the Development Strategy of New Uzbekistan for 2022-2026"

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The steady growth of the population in Uzbekistan, problems arising in the agricultural sector due to water shortages, as a result of which the import of meat, potatoes, oil products, sugar products, etc. is constantly increasing, and energy collapses should not be allowed to accelerate the process of transition to a green economy in our country is demanding. "Uzbekistan will lack 7 billion cubic meters of water by 2030." Germany's Statista according to the forecasts of the analytical statistics company, by 2040 there will be an extremely high (>80) level of water shortage in 44 countries of the world. Unfortunately, this list also includes Central Asian countries.

Due to the mentioned aspects, international organizations and individual governments have initiated active practical work against climate change, on the other hand, special attention is being paid to the orientation of economic sectors and sectors to the green economy.

The green economy can be viewed from two perspectives:

- first, as an economy that promotes economic empowerment and does not conflict with environmental sustainability and social well-being;
- secondly, as an economy that can provide new forms of socio-economic opportunities, contributing to the achievement of environmental goals.

is based on the green growth model, which provides high employment and equal distribution of the population's income. Income with minimal interaction with nature, that is, reducing the irreversible destruction of natural resources. The main idea of the concept of green growth is based on the fact that the goals of economic development should be compatible with environmental goals.

The main directions of ensuring green growth are "green" technologies aimed at reducing the negative impact on the natural environment by reducing the consumption of resources and their rational use, increasing production efficiency and reducing waste. A "green" economy, in contrast to an economy based on the consumption of natural resources (a brown economy), in the short term allows GDP, employment and income per capita to grow at the same or higher rates than in a resource economy. In the long term, it can improve the state of the natural environment and reduce social inequality. "Green" economy can be described as follows: saving resources and energy; less air pollution; clean and socially just.

Therefore, "green" technologies are mainly being developed as the basis of the "green" economy in areas such as combating air, water, and land pollution, generating electricity from renewable sources, energy efficiency, reducing harmful waste, waste management system, and mitigating the consequences of climate change.

Based on the above-mentioned studies, it can be recognized that the main directions of development of the "green" economy in most countries, including Uzbekistan, are now gaining significant scientific importance:

- conservation and efficient management of ecosystems;
- of energy to the use of renewable sources;
- improvement of energy efficiency in housing and communal economy and other sectors;
- use of environmentally friendly technologies in transport;
- management of air and water resources, their purification;
- improvement of the waste management system;

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- organic farming and agricultural production;
- development of new tourist destinations, including ecotourism.

Analysis and results

The transition to a "green" economy by abandoning a wasteful business model requires the introduction of new economic rules that encourage environmental behavior of economic entities. The private sector is very interested in projects based on "green" technologies, as it helps to increase production efficiency and determine a competitive advantage in the future. While performing its functions, the state is also interested in the rational use of resources and the improvement of the quality of life of citizens. However, neither the public sector nor private business often have sufficient financial resources to implement such projects. Gathering resources, capabilities and efforts of public and private parties on the basis of the Public-Private Partnership (PPP) mechanism, where the parties act as equal partners, in which it is possible to ensure the implementation of projects within the framework of the transition to public-private partnership. At the same time, the "green" economy model of public-private partnership should be understood as a mechanism for coordinating the activities of public and private sector entities, which allows accelerating the process of transition to the principles of "green" economy.

PPP is a financial relationship aimed at ensuring "green" economic growth as an effective mechanism for attracting investments. This allows to attract private sector resources and credit resources of banks, including international financial institutions, to ecological and "green" projects. In recent years, our country has been accumulating a certain experience in financing infrastructural PPP projects that contribute to the development of the "green" economy. International organizations, primarily the structures of the World Bank, allocate priority financial support to environmental projects in areas such as electricity, water supply and sanitation, solid household waste.

It is the green economy that enables resource saving, solves social problems against the backdrop of population growth, and improves living conditions.

In this regard, the development of the energy system, which is considered an important link of the economy, on the basis of the principles of green economy, is gaining importance at the global level. Therefore, the Resolution of the President of the Republic of Uzbekistan dated February 16, 2023, "On measures to accelerate the introduction of renewable energy sources and energy-saving technologies in 2023" was one of the important practical steps. At a time when the national "energy consumption in our economy is 2 times higher than other countries", it is necessary to switch to green energy.

A rapid transition to renewable energy has double benefits for the economy and society. "By installing renewable energy sources, switching consumers to alternative energy and introducing energy-saving technologies, it will be possible to generate an additional 5 billion kilowatt-hours of electricity and save 4.8 billion cubic meters of natural gas in 2023." As a result, on the one hand, the possibility of saving natural gas increases, and on the other hand, the release of carbon dioxide into the air decreases.

Turning now to the question of financing the transition to green energy, a total of 15.4 billion US dollars is expected to be directed to these goals. The sources of funding are as follows.

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In 2023, 27 projects on the construction of large-scale solar and wind power plants are expected to be implemented on the basis of public-private partnership. Also, in 2023, the address list of projects to connect large-scale solar and wind power plants to power transmission networks on the basis of public-private partnership was approved. It should be noted that cooperation has been established with foreign companies, particularly France, China, Switzerland, the United Arab Emirates, and Saudi Arabia, for the implementation of projects related to the construction and operation of solar and photoelectric power plants on the basis of public-private partnership.

Today, the Masdar company of the United Arab Emirates is implementing 4 projects worth 1.16 billion US dollars on the basis of public-private partnership. The first phase of these projects is expected to be launched in December 2023. ACWA Power Company of Saudi Arabia is implementing 3 projects worth 1.307 billion US dollars on the same terms. In this case, we should note that the guaranteed purchase of the produced electricity by the state is established.

Masdar company has been attracting loans from international financial institutions for the implementation of projects in Uzbekistan.

It should be noted that funds for the projects to be implemented in Uzbekistan are attracted by the Masdar company from international financial institutions. In this regard, the obligation of the Uzbek side includes the purchase of guarantees from the point of view of public-private partnership. Such public-private partnership financing systems can be used in the experiences of many developing countries .

Wider use of public-private partnership mechanisms in the processes of green economy development will pave the way for faster introduction of such an economy in the country. Very large public-private partnership projects are being implemented in the energy sector in our country. At the expense of introduction of "green energy" banking finance products in public-private partnership projects in the field of energy, attracting private investors to projects through financial support will allow expansion of such mechanisms . At the same time, it increases the possibility of using new and cheap financial resources in the financial financing of PPP projects.

In our country, commercial banks are actively providing loans for the purchase of solar panels (Table 3).

Table 1 by commercial banks for the purchase of solar panels until April 1, 2023²

No	Name of the bank	Total allocated loans		To business entities allocated loans			Loans allocated to households		
		the num ber	In billion soums	the num ber	In billion soums	power (kW)	the num ber	In billion soums	power (kW)
Total		2 795	227.6	91	160.3	12 390	2 704	67.3	6 039
1	Ozmilliybank	7	81.4	6	81.4	655	1	0.03	3
2	Self-construction bank	364	35.7	4	25.6	7,500	360	10.1	905

² Compiled by the author based on the information of the Central Bank of the Republic of Uzbekistan.

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3	Asaka Bank	52	12.5	1	11.4	1 138	51	1.1	107
4	Agrobank	369	16.7	25	7.3	734	344	9.4	821
5	Mortgage bank	143	15.6	4	12.5	55	139	3.1	278
6	People's Bank	872	18.6	10	1.1	140	862	17.4	1 619
7	Rural construction bank	209	6.3	4	1.1	56	205	5.3	504
8	Microcredit bank	733	24.2	10	4.5	467	723	19.8	1 755
9	Turan Bank	3	3.9	3	3.9	385	0	0.00	0
10	Contact bank	4	1.8	4	1.8	176	0	0.00	0
11	Partner bank	2	0.1	1	0.1	5	1	0.0	2
12	Silk Road Bank	6	1.8	2	1.6	405	4	0.1	14
1 3	Capital Bank	4	0.7	4	0.7	207	0	0.0	0
1 4	Current bank	1	2.0	1	2.0	220	0	0.0	0
15	Asia Alliance Bank	21	4.6	7	3.6	71	14	1.0	31
16	Universal bank	1	0.3	1	0.3	20	0	0.00	0
17	Guarantee bank	4	1.6	4	1.6	156	0	0.00	0

In today's practice, in addition to green loans, many other instruments of green financing are used in the transition to a green economy on a global scale . Among them are green and blue bonds, green insurance, green budget, green sukuk. In 2022, green bond issuance exceeded US\$1 trillion and is expected to reach US\$5 trillion in 2025.

It is necessary to start practical work in this regard in our country. It should be noted that ACWA Power of Saudi Arabia, which is implementing green energy projects in Uzbekistan, issued sukuk equivalent to 747 million US dollars in 2021. Also, the successful placement of sovereign green sukuk and corporate green sukuk in foreign countries is actively used in the financing of the green economy at the same time as sovereign and corporate sukuk.

It is necessary to speed up the energy reform and introduce mechanisms that encourage the efficient use of energy. In our country, we should also allow rapid depreciation in conditions of high energy consumption. Because the regular updating of technologies, on the one hand, increases efficiency, and on the other hand, reduces energy consumption. In this regard, Singapore's technological and green development is worth studying in detail.

In general, increasing the scale of green financing will serve to accelerate the transition to a green economy. Therefore, we believe that it is appropriate to pay attention to the above. Uninterrupted supply of electricity to the economy and active introduction of "Green Economy" technologies to all sectors, increasing the energy efficiency of the economy by 20% are considered urgent.

CONCLUSIONS

As a result of the conducted scientific research, we can make the following proposals regarding the use of public-private partnership mechanisms in the development of the green economy:

• It is necessary to speed up the energy reform and introduce mechanisms that encourage the efficient use of energy. It is appropriate to allow rapid depreciation in the national economy, where energy consumption is 2 times higher than in other countries.

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- Financial support to private investors through the introduction of "green energy" bank finance products in public-private partnership projects in the field of energy, as a result, allows expanding the scope of attracting investors to projects. At the same time, it increases the possibility of using new and cheap financial resources in the financing of PPP projects.
- Regular updating of technologies increases efficiency on the one hand and reduces energy
 consumption on the other. In this regard, Singapore's technological and green development is
 worth emulating in every way.
- It is necessary to effectively use levers that encourage the rational use of water .
- It is necessary to take into account the consequences of the implementation of projects on the transfer of local heating systems of social sector objects, enterprises producing greenhouses and building materials, cement producing enterprises to coal fuel, and the introduction of coal cogeneration technologies on the basis of public-private partnership.
- is not always effective to spend budget funds in the financing of the green economy.
- In order to actively introduce green financing instruments, it is necessary to develop the traditional market on the basis of healthy competition.

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