

İQTİSADİYYAT VƏ İDARƏETMƏ

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PRIORITIES OF THE INFLUENCE OF THE "GREEN" ECONOMY ON THE FORMATION OF SUSTAINABLE DEVELOPMENT IN AZERBAIJAN

Summary

The article notes that the transition to a "green" economy on a global scale, with commodity production, can have a beneficial effect on public health and at the same time will have a negative impact on atmospheric pollution. In this study, the author also examines the main aspects of the concept of economic development, which are the main factors influencing the provision of a "green" economy. **The purpose of this article** is to develop the main tasks of the state within the framework of the concept of economic development of the country. The events organized by the Azerbaijani state in the direction of the transition of a green economy, as well as a bilateral agreement with companies on the creation of new "green projects" related to hydropower, hydroelectric power plants and wind energy, are noted. **The methodology** of determining the principles and stages of the development of the green economy is also revealed. As a result, the features of the development of the green economy in Azerbaijan have been identified.

As a result of the study, the author comes to the conclusion that with the possibility of applying new methods and methods in the use of resources (economic and environmental) in developing countries of the world, progress is very slow, and the main reasons for such rates are revealed.

The reasons for the slowdown in the speed of application of the expected new principles in economic development, as well as in the field of environmental protection, are incidents requiring state intervention in the economic sphere. In the article, the author also revealed that in developing countries, of course, not everyone is satisfied with such events, which the state decides to hold events, there is special resistance from leading enterprises engaged in the fuel and energy system. Because the heads of oil and gas companies do not seek to apply a green economy and try to do everything possible to stop this process of "greening" on a global scale. Even these companies, if necessary, agree to give up the expected large-scale profits that they are seeking.

Keywords: *economic development, green economy, projects, applied measures*

I. INTRODUCTION

During the period of human activity, regardless of any desires, they pollute the environment causing enormous damage that cannot return to the previous state. Since, until recently, people lived according to the principles of requirement and condition, which they called "after us, at least the flood". But despite the recent principle, at this time people tend to change the direction of their life activities in accordance with their principles in a

positive way. Given these meanings, the surrounding countries of the world perceived that moving to a Green economy. All this is direct proof that the world is going through the process of transition to a "green" economy and scientists consider this meaning to be the main key factor. Therefore, countries of the world support government measures towards the development of a green economy. In our opinion, all of the above mentioned meanings are direct evidence of the process of transition of the countries of the world to a green economy.

In economic literature, it is noted that the green economy is a new model of economic development. This model is aimed at shaping people's responsibility towards economic and environmental resources. And the use of these natural resources with maximum adjustments or effectiveness prevents environmental pollution, since this process is interesting for them. The green economy model is aimed at finding and determining the most effective compromise option between improving the well-being of the world's population and preserving natural resources. In other words, the green economy focuses on solving a compromise between people's desires and capabilities [9].

It is known that as a result of transformations in the civilized world, there is a process of economic development, a process of economic development accompanied by the introduction and steady growth of all types of production and consumption, which followed the period of civilization until 1950 for half a century, While a large number of products were produced, which is aimed at improving the welfare of the population. The production of products that meet the demand of the population, along with the growing demand of the world's population, marked the beginning of the transition to a green economy [8].

Thus, the rapid development of commodity production means a positive impact on improving the well-being of the world's population, and a negative impact on environmental pollution (ecology). As a result of calculations, it has been established that more than 10 million hectares of forests are destroyed by humans annually in the world. And to balance this process, the process of creating new forest strips in its place is carried out either very poorly or is not drained by all States at all. The rate of carbon dioxide emissions into the atmosphere from the production of new and demanded goods and the use of vehicles is also increasing. At the same time, the release of plastic substances and waste from construction products to landfills in large volumes has also repeatedly led to pollution of the environment with waste in excess of the norm. Humanity will face a great environmental threat if the civilized world does not pay attention to the process of environmental pollution. Therefore, in the current conditions, the implementation of measures aimed at jointly solving the problems of sustainable development with a green economy is one of the main tasks facing each country.

II. DEVELOPMENT OF THE MAIN TASKS WITHIN THE FRAMEWORK OF THE CONCEPT OF ECONOMIC DEVELOPMENT OF AZERBAIJAN

A compromise option by mitigating the contradictions between environmental conservation and economic growth, including natural resources. The optimal variant of these two main indicators is considered to maintain a balance between economic growth and the preservation of the ecological environment, and this process provides an opportunity to mitigate contradictions, which includes natural resources and economic development. When defining the goals of the concept of economic development, three axioms were mainly used, which include:

- It is impossible to expand the sphere of influence indefinitely within a limited space;
- Land resources are limited, which means that an increase in human consumption will sooner or later lead to their depletion;
- All the processes taking place on earth are interconnected.

It should be noted that some countries of the world have already begun to seriously deal with environmental safety issues. And they have developed and begun to implement a number of economic measures aimed at combating negative anthropogenic impacts. These anthropogenic impacts can cause serious damage to the environment. The countries of Western Europe, South Korea, the United States, China, etc. are already dealing with environmental safety issues. These countries have begun to struggle with the negative anthropogenic impact that harm the environment.

At this time, the Azerbaijani state, like other countries, has begun to deal with environmental safety issues. Since appropriate measures have been taken in the Republic of Azerbaijan to eliminate environmental pollution and the resolution of issues related to these problems continues. Solving the problem of preserving natural (ecological and economic) resources has always been and remains the main issue of all countries of the world. Among these measures, it is possible to note the announcement of December 25, 2023 by the Decree of the President of the Republic of Azerbaijan of 2024 in Azerbaijan as the "Year of Solidarity for a Green World". In accordance with the decree, one of the priority issues of socio-economic development until 2030 and, most importantly, "a country of clean environment and green growth" has been identified. Priority issues related to environmental issues, forced work in these areas is being carried out in Azerbaijan in an appropriate sequence. These priority issues include: the creation of green zones, the restoration and expansion of existing parks, ensuring the effective use of existing natural resources, newly created sources of heat and water, and this also gives reason to confidently ensure its development, although it lags behind some developed countries that are leading in this area, including for the development of the green economy [1].

It should be noted that on the basis of the territories liberated from occupation, which had been occupied by Armenian vandals for many years (about 30 years), the Decree of the President of the Republic of Azerbaijan dated 07.07.2021 redistributed economic regions and created the Karabakh and East Zangezur economic regions, as well as, after this Decree, the Karabakh and East Zangezur economic regions and Nakhchivan The Autonomous Republic has been declared a green energy zone. Extensive monitoring is being carried out in Jabrayil, Zangelan, Fizuli, Gubadli districts and adjacent villages belonging to the East Zangezur Economic Region in order to identify environmental terrorism and spread its consequences around the world.

Based on the monitoring conducted with these territories, it was established that as a result of the environmental terror committed by the Armenians, 10 hectares of forest lands were looted, great damage was done to the natural landscape and biological diversity of the region, and hundreds of natural monuments were purposefully destroyed. One of the main conditions for priority in the direction of environmental protection is considered to be a large-scale restoration and reconstruction process on a par with the stages of the "Great Return" carried out in these liberated territories. In these places, a "smart city", a "smart village", etc. are being created. Based on the introduction of innovative approach models, the ecosystem of the territory is being restored and the transition to a green economy is being phased out [10].

The creation of various types of green energy and its transportation to world markets within the framework of the "Year of Solidarity for a Green World" is one of the main

priorities in the energy policy of the Republic of Azerbaijan. Thus, Azerbaijan has set a goal to produce electricity by emitting renewable energy sources, to bring the share of this type of energy to 30% by 2030.

III. PRINCIPLES AND STAGES OF THE GREEN ECONOMY

As part of the implementation of various aspects of the environmental program adopted by the United Nations in 2011, four of its basic principles were identified. The principles of the mentioned program include:

- the principle of efficiency and sufficiency -this principle implies limiting the exploitation of land resources at a harmless level in order to restore natural systems. In this case, states are interested in the introduction of low-carbon and resource-saving technologies, maintaining stable production and consumption;
- the principle of well-being (peace of mind)- This principle provides for special attention to the social and economic well-being of the population. At this time, there is a need to revise the criteria for the level of well-being of the population. Thus, since the level of GDP (gross domestic product) does not take into account the impact of the environment, it is not considered a suitable tool for optimal assessment of the level of well-being;
- the principle of good governance - this principle requires that the economy be "transparent" and accountable. Thus, responsibility for environmental damage is distributed among all countries based on the ratio of impacts. The economic system is expected to be based on environmental standards adapted to the cultural characteristics of different countries;
- the principle of a healthy planet - this principle determines the investment of states in the restoration of natural resources (ecology) and the preservation of natural diversity. Thus, the motto of the new system of this planet should be: "we did not inherit the earth from our ancestors, we borrowed it from our children".

Currently, no country questions the need to switch to a new economic model in order to achieve economic development. However, it should be noted that this switching process must be performed with some caution and under the necessary conditions. If this condition, which we have discussed, is unexpected or unfulfilled, in addition to the environmental disaster that may occur in the world, huge financial losses and socio-political problems may arise [2, pp.264-271]. The transition to a new economic model can be carried out in four stages using the example of environmental initiatives implemented by the European Union:

- reduction of production investments that will damage the environment;
- Introduction of a high level of tax burden on "dirty" industries (high-carbon industries);
- Increasing financial support for "green" industries;
- Reducing production methods that consume too many resources.

IV. THE CONCEPT OF A GREEN ECONOMY AND SUSTAINABLE DEVELOPMENT

The concept of "sustainable development" began to be used in 1987 after the publication of the report of the UN International Commission on Environment and Development. The materials of the report reflect a set of measures aimed at meeting the

needs of people, while the main issue is considered to be meeting people without harming the environment [3, p.58].

Based on the conducted research, we can conclude that in order to achieve sustainable development, a balance must be maintained between the following main components: -economic growth; - social responsibility; - ecological balance. Thus, for a green economy, the main process is to maintain a balance between the above-mentioned components and eliminate (mitigate) existing contradictions [13, pp.60-78].

The UN General Assembly (2015) ecology and development within the framework of the program identified 17 priority areas, including economic (poverty eradication, hunger eradication, industrialization, innovation and infrastructure formation, achieving decent work and economic growth, ensuring responsible production and consumption, reducing economic inequality), social (ensuring the consumption of clean energy water, achieving environmentally friendly and affordable energy, combating climate change, protecting terrestrial ecosystems, conservation of marine ecosystems) and environmental (improving human well-being and health, achieving quality education, eliminating gender inequality, ensuring peace, justice and an effective institution, ensuring urban security, ensuring international partnership in the interests of future generations) [9].

In our opinion, active support of international initiatives in the field of sustainable development by all sectors of the economy is considered important. For example, in Azerbaijan, within the framework of the banking sector, attempts are being made to popularize the process of approach and promote the current agenda in the country, contributing to solving the most important economic, environmental and social problems.

V. FEATURES OF THE GREEN ECONOMY DEVELOPMENT STRATEGY IN AZERBAIJAN

The greening of the economy and its sustainable implementation in Azerbaijan has begun in recent years. Thus, our country has rich natural resources, including oil, cotton, etc. Therefore, the process of importing these types of products without processing them should be gradually reduced. And this requires that both state and industry institutions, private enterprises, etc. should be involved in achieving a green economy at the maximum level [12]. They must work from the heart. It should also be noted that in some "green" areas, Azerbaijan did not lag far behind, even took a place among the countries in its respective ranks. For example, hydropower plants, the share of electricity produced by wind power has increased in recent years, and this growth amounted to about 20%. The amount of electricity produced in Azerbaijan for 2005-2022 is given in Figure 1.

An analysis of the data on electric energy produced in Azerbaijan in 2005-2022 shows that during the period under review, the amount of electric energy produced in the country increased by 6168.3 million kilowatt hours. It should also be noted that in 2017 and 2020, the number of this indicator decreased by 632 and 233.8 kilowatt hours, respectively, compared to the previous year.

The production dynamics of this indicator corresponded to the equation shown below:

$$y = 786.59x + 20635. \quad (1)$$

And the regression coefficient was $R^2 = 0.7167$, which shows the high adequacy of the model.

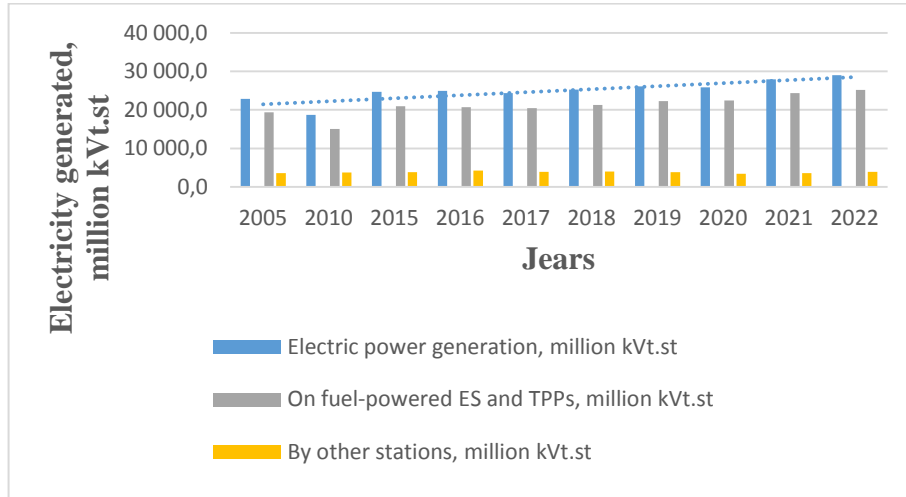


Figure 1. The amount of electricity produced in the country

Source: Based on [1] compiled by the author

The analysis of statistical materials shows that the production of thermal energy in 2022 increased 2.17 times compared to 2015. The highest growth in the compared period was in wind energy 18 times and in solar energy 13 times (Figure 2).

Based on the presented data for a certain period, a regressive model of energy development in Azerbaijan has been developed, which can be predicted further development using the following formula:

$$y=51.736x+2003.5; \quad R^2=0.7973 \quad (2)$$

In the eight months of 2023, 35 hydroelectric power plants in Azerbaijan have a capacity of 1,308 MW, 8 wind farms, three of which are hybrid, have a capacity of 66.4 MW, two bioenergy stations, one of which is hybrid, have a capacity of 37.7 MW, and 13 hybrid solar power plants have a capacity of 281.9 MW. In addition, the total power generation capacity of Azerbaijan is 8320.8 MW, and the capacity of renewable energy power plants, including large hydroelectric power plants, is 1687.8 MW, which is 20.3% of the total capacity [1]. In the whole country, electricity generation by hydroelectric power plants increased by 2% (to 26.5 million kWh) compared to the same period last year and amounted to 1.282 billion kWh.

As a continuation, relevant work is being carried out in the field of increasing energy potential, for which, by Decree of the President of the Republic of Azerbaijan dated September 22, 2020 (No. 1159), the State Agency for Renewable Energy Sources (GAVIE) was established under the Ministry of Energy of the Republic of Azerbaijan. It should be noted that Azerbaijan is among the countries with high potential of renewable energy sources. For example, the technical potential of these types of energy resources in our country is 135 kW on land and 157 GW at sea. Based on the assessment, it was determined that the economic potential of renewable energy sources is 27 GW, as well as 3,000 MW of wind energy, 23,000 MW of solar energy, 380 MW of bioenergy potential and 520 MW of mountain river potential [1].

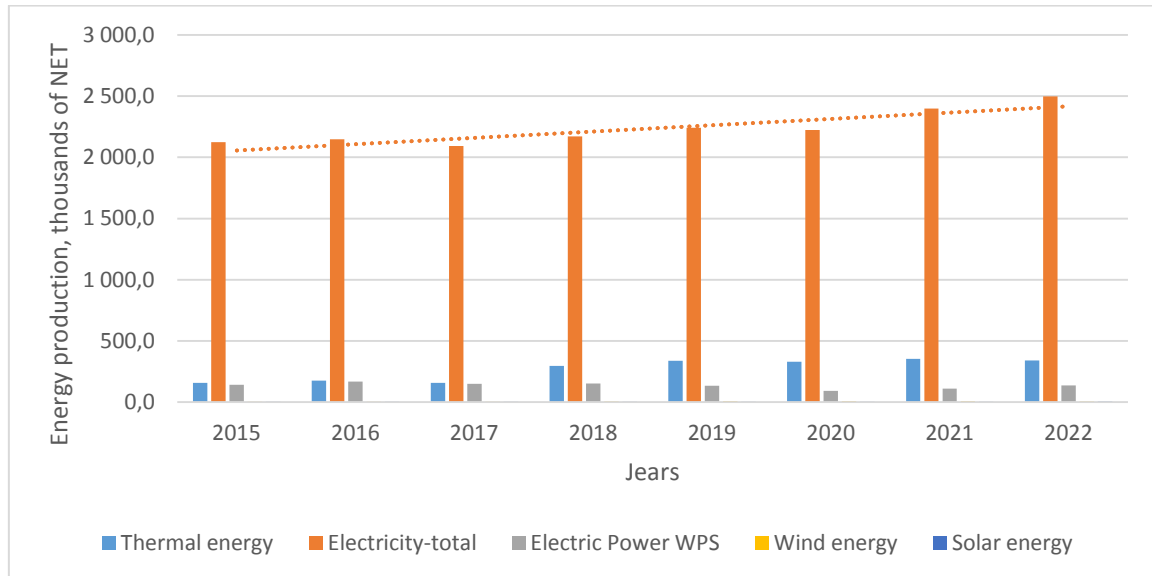


Figure 2. Energy production in Azerbaijan for 2015-2022

Source: Based on [1] compiled by the author

A number of leading global companies (Masdar, ACWA Power, BP, China Gezhouba Group Overseas Investment, Total Energies, Nobel Energy, A-Z Czech Engineering, etc.) have been working in Azerbaijan since 2020 to implement projects in the field of renewable energy sources.

In 2023 (October 26), within the framework of cooperation with the UAE, Masdar commissioned the largest solar power plant in the Caspian region and CIS countries, Garadagh Solar Power Plant with a capacity of 230 MW. This is the first industrial-scale solar power plant built with the involvement of foreign investments in the amount of 262 million US dollars due to the costs incurred. Due to the generation of 500 million kWh of electricity at the plant, 110 million m³ of natural gas will be saved, and the amount of carbon dioxide emissions into the atmosphere will be reduced by 200 thousand tons. The power plant has an area of 550 hectares, where 330 kW substations were built to connect the station to the electric grid with the installation of 570 thousand solar panels [1].

According to the preliminary analysis carried out on the project, compiled on the basis of "The Roadmap for the development of the use of offshore wind energy in Azerbaijan", the total technical potential of wind energy in the Azerbaijani part of the Caspian Sea was estimated at 157 GW, with 35 GW in shallow basins and 122 GW in deep basins.

VI. CONCLUSION

Research shows that achieving sustainable development supports the restoration of a balance between economic growth, social responsibility and environmental balance.

Developing countries are striving to introduce new environmental principles for environmental safety at a very slow pace. There are a number of reasons for the expected slow progress. Therefore, serious government interventions are required to achieve environmental safety. Since a number of countries are not striving to achieve this process, or they simply cannot be considered [5-6].

They are doing everything possible to stop the process of "greening". Based on the research, we came to the conclusion that the main obstacle is resistance from fuel and energy enterprises. Since oil and gas companies, which receive a large amount of profit, are in no hurry to give up and, if possible, the countries have stopped the process of

"greening". Even in this direction, countries and companies that hinder the growth of energy production in Azerbaijan and its promotion to the markets of Europe and other countries are trying to hinder this development.

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Vilayət İsmayılov

"YAŞIL" İQTİSADİYYATIN AZƏRBAYCANDA DAYANIQLI İNKİŞAFIN FORMALAŞMASINA TƏSİRİNİN PRİORİTETLƏRİ

Xülasə

Məqalədə qeyd olunur ki, qlobal miqyasda xammal istehsalı ilə "yaşıl" iqtisadiyyata keçid əhəlinin sağlamlığına faydalı təsir göstərə bilər və eyni zamanda atmosferin çirklənməsinə mənfi təsir göstərə bilər. Bu araşdırmada müəllif "yaşıl" iqtisadiyyatın təmin edilməsinə təsir edən əsas amillər olan iqtisadi inkişaf konsepsiyasının əsas aspektlərini də nəzərdən keçirir. Bu məqalənin *məqsədi* ölkənin

İqtisadi inkişafı konsepsiyası çərçivəsində dövlətin əsas vəzifələrinin işlənilməsindən ibarətdir. Azərbaycan dövlətinin yaşıl iqtisadiyyata keçid istiqamətində təşkil etdiyi tədbirlər, həmçinin hidroenergetika, su elektrik stansiyaları və külək enerjisi ilə bağlı yeni "yaşıl layihələr" in yaradılması ilə bağlı şirkətlərlə bağlanmış ikitərəfli sazişlər və onların əsas yerinə yetirəcəyi işlər qeyd olunur. Yaşıl iqtisadiyyatın inkişaf prinsiplərini və mərhələlərini müəyyənləşdirmək üçün *metodologiya* da açıqlanır. Aparılmış tədqiqat nəticəsində Azərbaycanda Yaşıl iqtisadiyyatın inkişaf xüsusiyyətləri müəyyən edilib.

Tədqiqat nəticəsində müəllif belə bir *nəticəyə gəlir* ki, dünyanın inkişaf etməkdə olan ölkələrində resurslardan (iqtisadi və ekoloji) istifadədə yeni metod və qəbuledicilərdən istifadə etmək mümkündür, bu istiqamətdə tərəqqi çox yavaş gedir və bu cür yavaş tempin əsas səbəbləri müəyyənləşdirilir.

İqtisadi inkişafda, eləcə də ətraf mühitin qorunması sahəsində gözlənilən yeni prinsiplərin tətbiqi sürətinin yavaşlaşmasının səbəbləri dövlətin iqtisadi sahəyə müdaxiləsini tələb edən hadisələrdir. Məqalədə müəllif, inkişaf etməkdə olan ölkələrdə, əlbəttə ki, hər kəsin dövlətin qərar verdiyi bu cür tədbirlərdən məmnun olmadığını, yanacaq və enerji sistemində çalışan aparıcı müəssisələrin xüsusi müqavimət göstərdiyini də açıqlayır. Çünki neft və qaz şirkətlərinin rəhbərləri "yaşıl" iqtisadiyyatı tətbiq etməyə çalışmırlar və bu "yaşıllaşdırma" prosesini qlobal miqyasda dayandırmaq üçün əllərindən gələni etməyə çalışırlar. Hətta bu şirkətlər, ehtiyac olduqda, axtarıqları gözlənilən geniş miqyaslı mənfəətdən imtina etməyə razıdırlar.

Açar sözlər: iqtisadi inkişaf, yaşıl iqtisadiyyat, layihələr, tətbiq olunan tədbirlər

Вилаят Исмаилов

ПРИОРИТЕТЫ ВЛИЯНИЯ "ЗЕЛеноЙ" ЭКОНОМИКИ НА ФОРМИРОВАНИЕ УСТОЙЧИВОГО РАЗВИТИЯ В АЗЕРБАЙДЖАНЕ

Резюме

В статье отмечается, что переход к "зеленой" экономике в глобальном масштабе, с сырьевым производством, может благотворно сказаться на здоровье населения и в то же время окажет негативное влияние на загрязнение атмосферы. В данном исследовании автор также рассматривает основные аспекты концепции экономического развития, которые являются основными факторами, влияющими на обеспечение "зеленой" экономики. *Целью данной статьи* является разработка основных задач государства в рамках концепции экономического развития страны. Отмечаются мероприятия, организованные азербайджанским государством в направлении перехода к зеленой экономике, а также двустороннее соглашение с компаниями о создании новых "зеленых проектов", связанных с гидроэнергетикой, гидроэлектростанциями и энергией ветра. Также раскрываются *методология* определения принципы и этапы развития зеленой экономики. В результате были выявлены особенности развития зеленой экономики в Азербайджане.

В результате проведенного исследования автор приходит к *выводу*, что при наличии возможности применения новых методов и приемчиков в использовании ресурсов (экономических и экологических) в развивающихся странах мира прогресс идет очень медленно, и выявляются основные причины таких темпов.

Причинами замедления темпов применения ожидаемых новых принципов в экономическом развитии, а также в области охраны окружающей среды являются инциденты, требующие вмешательства государства в экономическую сферу. В статье автор также раскрыл, что в развивающихся странах, конечно, не всех устраивают подобные мероприятия, о проведении которых решает государство, особое сопротивление испытывают ведущие предприятия, занятые в топливно-энергетической системе. Потому что руководители нефтяных и газовых компаний не стремятся применять "зеленую" экономику и стараются сделать все возможное, чтобы остановить этот процесс "озеленения" в глобальном масштабе. Даже эти компании при необходимости соглашаются отказаться от ожидаемой крупномасштабной прибыли, к которой они стремятся.

Ключевые слова: экономическое развитие, зеленая экономика, проекты, применяемые меры