

## PROTECT THE ENVIRONMENT AND RATIONAL USE OF ENERGY RESOURCES THROUGH TAX MECHANISMS

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**Abstract:** In the article much attention is given to importance of the energy resources in economic development of the countries, their limitation and the negative consequences inefficient use of these resources.

Moreover, in article the best practices of developed countries on the reduction of an expenditure of energy and their effective use by means of the tax mechanism are also studied. Besides, some related national legal acts and the result of them have been analyzed.

In addition, this paper is thus to call for the prevention of excess air pollution from ineffective use of energy and saving energy resources in Uzbekistan through a tax mechanism.

At the end of this article conclusion is given on effective use of energy, stimulation use of energy saving technologies and the positive results of increasing the role of tax mechanism in these processes.

**Key words:** Tax, tax incentives, tax mechanism, tax credit, ecology, nature, protect the nature, protect the environment, energy resource, energy consumption, natural resources.

### **Introduction.**

The globalization process in the global economy has given impetus to the development of all other sectors along with the manufacturing sector. As a result, by the end of the last century, the increase in consumption of natural fuels and the depletion of energy resources began to worry humanity. This is because the development of human society and the increase in energy consumption is leading to depletion of these resources.

Therefore, one of the most pressing problems in society is the creation of new, inexpensive, and renewable energy-intensive sources of energy. Developed countries and

companies have begun to engage leading experts and scientists in the field of search for alternative energy sources.

This issue has become more relevant in the 21st century and energy security has become an important element of state security. The economic security of any country now depends on the level of energy supply. Therefore, each state is developing different measures to ensure its energy security.

### **Literature review.**

Due to the relevance of this direction, scientists have been constantly conducting research and presenting their scientific results.

A number of scholars have done research on energy conservation in the area of environmental security, the widespread use of renewable energy and the introduction of taxation mechanisms to promote this area.

In particular, several scientific articles by local scientists F.Abdullaeva, Yu.Kutbitdinov, B.Alykhonov and S.Samoylov have been published on the importance of efficient and efficient use of energy resources in ensuring environmental security

Also, on the importance and positive impact of tax incentives for the provision of environmental security, the use of renewable energy sources, see the following researchers J Erome L. Garciano (2014), Steven Nadel (2012), Susana Silva, Isabel Soares, Carlos Pinho (2019), David DJ Taylor, Santiago Paiva, Alexander H. Slocum (2017), Dirk Heine, John Norregaard, and Ian W.H. Parry (2012), Janete E. Milne (2007), Herman Vollebergh (2014), Ian W.H. Parry (2011).

In particular, according to B. Alikhanov and S. Samoylov's research, the total daily consumption of organic fuel in the world amounts to 12 billion cubic meters tons. The amount of fossil fuels produced by countries all over the world for the last forty years exceeds the amount of hydrocarbon resources that mankind has extracted over the previous period.

It is known that the amount of natural resources is limited and their constant use leads to complete depletion. If the level of their development continues at current rate, it is estimated that the world's black gold reserves deplete in 55-60 years, natural gas in 70-75 years, and coal in 150-160 years.

According to this study, 5 billion tons of carbon dioxide is released into the atmosphere each year. This is 3.5 times more than in the first half of the twentieth century.

**Research methodology.**

The achievement of the set objectives and the implementation of the study is through the theoretical research based on the methods of savings of energy resources and the prevention of the perpetual increase in environmental damage.

Also in this direction the results of the research work performed by foreign and local scientists were studied and independent approaches were formed.

It is also aimed for the development of scientific and practical proposals and recommendations on improving the system of incentives for the use of renewable energy sources and at the same time increasing the use of tax mechanisms.

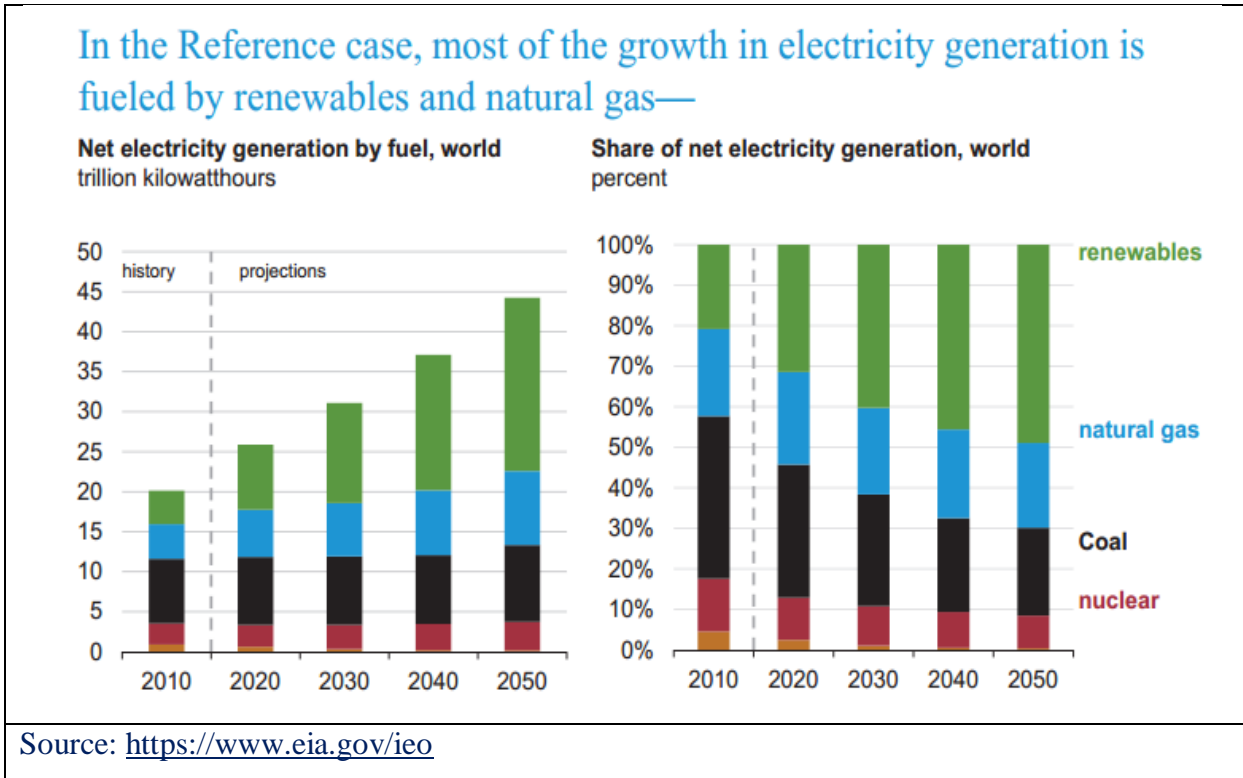
In addition, scientific work carried out by international organizations such as IEA, World Bank, ADB, OECD and official indicators of the State Tax Committee, the Ministry of Finance and the State Committee for Nature Protection.

**Analysis and results.**

According to the analysis and research carried out by scientists, the global demand for electricity will increase by 70% by 2035 and by 30% on the total energy demand.

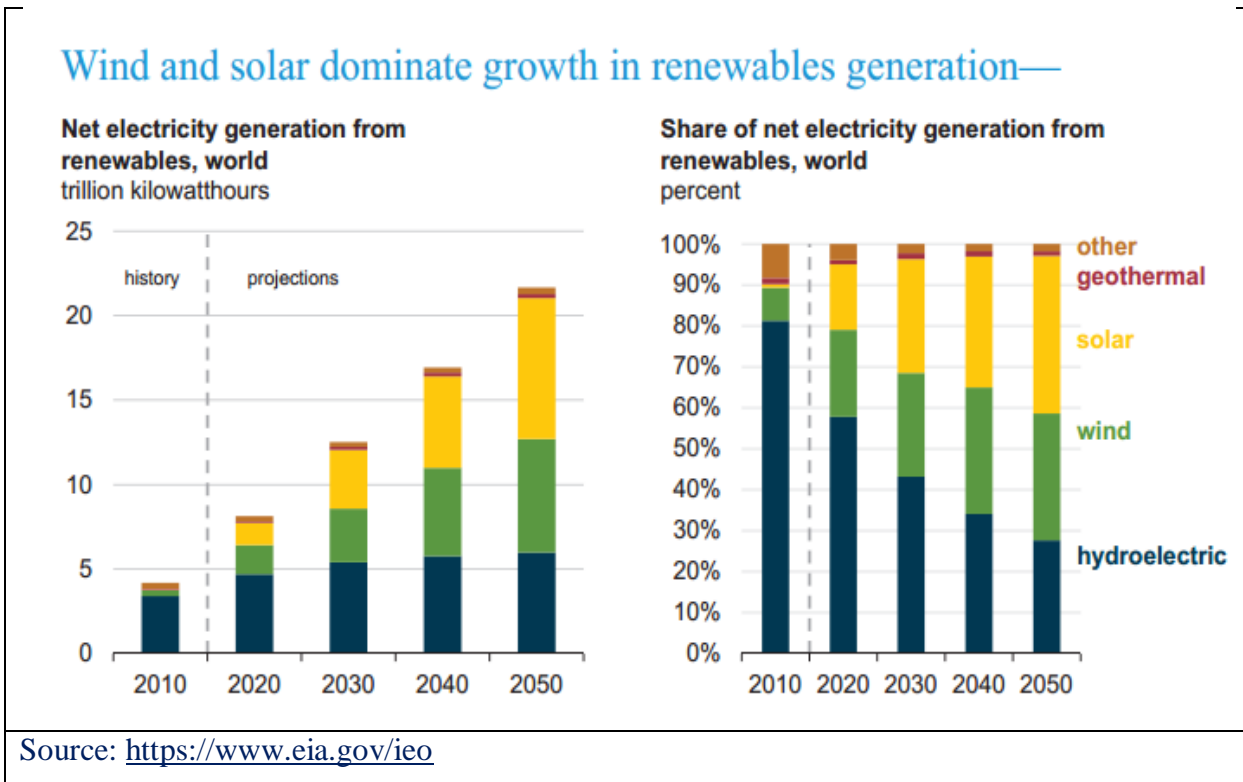
Most of the carbon dioxide (CO<sub>2</sub>) emissions come from the energy sector. For example, the sector as a whole accounted for an estimated 23% of global energy-related CO<sub>2</sub> emissions in 2016.

As a result, mankind is plagued by various disorders and premature death. Research shows that the only solution to this problem is renewable energy. In this regard, the international community is planning to significantly increase the share of renewable energy sources in the near future, as can be seen in the following figures.



**Figure №1.** Most of the growth in electricity generation is fueled by renewables and natural gas

The share of solar and wind renewable energy in this renewable energy is expected to grow exponentially over the years. The following are the results of the survey and the figures can be clearly seen.



**Figure № 2.** Wind and solar dominate growth in renewables generation.

Many developed countries have achieved economic growth without resorting to increased use of energy resources. Over the past 10 years, energy resources consumption per year has decreased in the USA by 65 million tons of standard fuel, in the UK by 20 million tons of standard fuel, in Germany by 21 million tons of standard fuel, in France by 30 million tons of standard fuel. While throughout these period in above mentioned countries the GDP growth.

According to the World Bank and the UN, Uzbekistan only loses about 4.5% of GDP annually due to low energy efficiency of the economy. At the same time, the economy of Uzbekistan is one of the most energy-intensive in the world and is three times higher than the global average, for example, the energy intensity of the country's GDP is 35% more than Kazakhstan, and 3 times more than in Germany.

The level of greenhouse gas emissions in Uzbekistan remains very high among the Commonwealth of Independent States (CIS) countries and, in accordance with obligations under the Paris Agreement, it is planned to reduce the country's GDP by 2030 by 10% compared to 2010.

In this regard, given the limited reserves of hydrocarbons, the tasks of increasing energy efficiency and increasing the production of renewable energy are extremely relevant and promising for the development of the economy of Uzbekistan.

According to experts, investing one dollar in energy saving yields a return of three dollars, which indicates the economic profitability of energy saving, compared with increasing production and energy production, as this allows one to simultaneously solve issues related to updating and modernizing production facilities, as well as providing protection environments.

It should be noted that with the development of renewable energy industry significant jobs will be created in this sector. For example, the renewable energy sector employment is generally (directly and indirectly) around 11 million people worldwide in 2018.

The relevance of this sector to our country today can also be seen in the tasks set out in the Decree of the President of the Republic of Uzbekistan dated August 22, 2019, PQ-4422. The decision sets forth the following plan, with particular emphasis on increasing the share of renewable energy by 2030.

№	The name of indicators	Forecast for an increase in generating capacity, MW					The share of electricity generation, %	
		2019 yr.	2020 yr.	2021 yr.	2022 yr.	2023 — 2030 yrs.	2018 yr.	2030 yr.
<b>Total</b>		<b>1074,1</b>	<b>886,8</b>	<b>1 961,5</b>	<b>2 061,6</b>	<b>14 017,8</b>	<b>100</b>	<b>100</b>
<b>1.</b>	Traditional energy	1 050	1 807	1 777	2 259,4	10 910,2	90	75
	<i>including capacity withdrawal</i>	-	1 060	320	740	4 280	-	-
<b>2.</b>	Renewable energy sources	24,1	119,8	504,5	542,2	7 387,6	10	25
	of them:							
<b>2.1.</b>	Hydropower	24,1	119,8	204,5	42,2	1 487,6	10	11,2
<b>2.2.</b>	Solar power	-	-	300	400	4 300	-	8,8
<b>2.3.</b>	Wind power	-	-	-	100	1 600	-	5

**Table № 1.** Target parameters further development of renewable energy

The Decree of the President of the Republic of Uzbekistan dated October 4, 2019 “On approval of the strategy of transition of the Republic of Uzbekistan to the “green” economy for 2019 – 2030” was adopted. The main source of renewable energy is the use of renewable energy sources.

This decision aims to provide up to 100% of population and economic sectors in Uzbekistan with access to modern, low-cost and reliable energy by 2030.

Implementation of this task is the most urgent issue today, since the annual growth in electricity consumption is 6-7%. One of the main reasons for this is the rapid growth of all sectors of the economy, with the constant increase in population.

Therefore, renewable energy in the foreseeable future should become an important driver of energy sector development. The feasibility of this measure is explained by:

- The country has great potential for the development of solar energy. According to experts, the potential of renewable energy sources in Uzbekistan is about \$51 billion. The technical capacity of the tone of oil equals approximately 182.32 million tons, which is 3.1 times higher than the current annual production of primary energy resources;

- The development of solar energy can bring huge multiplier benefits to the economy and seriously stimulate demand for additional industries, increase the demand for

employers and, accordingly, a number of factors can be used to accelerate the reform process.

If the current model of resource use is not revised, the energy resource deficit will be 65.4% by 2030, and the highest rates of economic growth will not exceed 0.1% per year (unless fully replaced by the import substitution model).

### **Discussion.**

Summarizing the above data, we recognize that the economic and social development of any country is directly dependent on its energy security and supply.

The relevance of this issue can be seen in the tax incentives provided to support this industry. In particular, the Law of the Republic of Uzbekistan dated May 21, 2019 "On the use of renewable energy sources" provides for the exemption from all taxes on the producers of renewable energy sources and property and land taxes for their users.

Taxation mechanisms are widely used in developed countries in the area of energy efficiency and energy saving.

### **Conclusion and recommendations.**

With recent calls of global warming environmental protection and efficient use of natural resources are increasingly becoming a noble cause throughout the world. Tax policy generally targets fiscal, economic, social and environmental objectives. In this regard, it is necessary to use special taxation mechanisms in our country in the following areas:

- introduction of tax incentives based on tax regimes to encourage localization of equipment for the use of renewable energy sources;
- encouraging the developers of energy-efficient buildings and their buyers through taxation and soft loans;
- Exemption from all taxes in support of activities to raise public awareness of renewable energy sources and energy efficiency;
- At the same time, it is advisable to introduce specific high-rate tax mechanisms for inefficient energy users.

The above mentioned issues of energy conservation and promotion of renewable energy will promote the efficient use of natural resources and, most importantly, environmental security.

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