Academicia Globe:
Inderscience Research

**ISSN:** 2776-1010 Volume 2, Issue 6, June, 2021

# THE IMPACT OF ALTERNATIVE ENERGY ON THE ECONOMY AND ITS EFFECTS

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**Annotation**
The article discusses about currently having alternative energy sources, oil and gas reserves which are one of the most important factors in achieving unlimited income and increasing its position and influence in the international arena.

**Keywords:** energy, resource, hydrocarbon, investment, renewable energy, raw materials, modernization, oil and gas.

It is known that finding the most efficient energy sources has always been of paramount importance in the history of civilizations. First of all, huge investments have been spent to develop hydrocarbon reserves which are the main raw materials for electricity and heat. It is clear that today the availability of energy resources, oil and gas reserves is one of the most important factors in obtaining unlimited income and increasing its position and influence in the international arena.

However, such changes will never dampen the growing interest and need for renewable energy sources, especially the use of the world's cleanest solar energy. In particular, according to the International Energy Agency, when global electricity production is growing at an average rate of 3.4 percent, solar energy, which is the most promising component of renewable energy sources,. is growing at an unprecedented rate every year for the year, that is to say by 60 percent in the next five years

According to international experts, there are many reasons for the rapid growth of interest searching for alternative and renewable energy sources in the world and increase their efficiency, in particular, the use of solar energy for electricity and heat. First of all, this is due to the fact that it connects with is the growth every year of the demand for energy in the global economy. Another reason is that the international community is concerned about the growing difficulty of developing new sources of oil and gas, which are traditional hydrocarbons, and at the same time, their reserves are declining. But there is one important factor which can never be overlooked and that is the unprecedented expansion of the use of fossil fuels, which causes significant damage to the environment, the health of the population and negatively impacting for the quality of life and threatening sustainable development on a global scale in the future.

One of the ways of solving situation is that first of all, it is to increase investment in solar energy development projects as the most efficient and promising source of renewable energy. There is a certain logic in the opinions of some scholars who have come to the conclusion during the analysis of the causes of the recurring global economic crises from time to time. That is to say, finding a way out of the catastrophic crisis will lead the world community to the adoption of a fundamentally new generation of modern technologies, in other words, a new stage of scientific and technological progress that will ensure more rapid and economical growth of production. In this regard, it is not difficult to make the

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following conclusion. The way out of the global crisis of 2008 largely depended on how quickly we moved to a new stage of technological development, primarily in the energy sector.

One of the main obstacles to the recovery of the economies of developing countries today is the fact that conventional energy resources, especially oil prices, remain unreasonably high. The mass introduction of cost-effective photovoltaic energy sources will allow optimizing oil prices in the future. This will be a stimulus for the rapid development of developing countries, which are forced to spend their limited foreign exchange reserves to buy hydrocarbons from abroad. This means that solar energy could be one of the key factors to overcome the crisis.

The work being done in Uzbekistan on the use of solar energy for energy purposes and the factors which require the expansion of the scope and practical direction of these processes: the country provides a stable high growth rate, as well as the ongoing structural changes, diversification and modernization of the economy, rapid development of industry, the formation of a modern and powerful gas-chemical complex equipped with the most advanced technologies for deep processing of oil, gas and other raw materials.

According to international financial institutions, high economic growth in Uzbekistan will continue in the near future. Accounts show that given the high level of industrial development, the country's demand for electricity in 2030 will double compared to the current year and will exceed 105 billion kilowatt-hours. Uzbekistan has great potential for this due to its geographical location and climatic conditions. The weather in Uzbekistan is open more than 320 days a year and our country has an advantage over most regions of the world in terms of the number of sunny days a year. According to the Asian Development Bank and the World Bank, the total potential of solar energy in Uzbekistan exceeds 51 billion tons of oil equivalents.

Research in the use of solar energy in our country has been started to develop rapidly since the establishment of the Scientific and Experimental Center of the Physics-Sun Research and Production Association of the Academy of Sciences of Uzbekistan in the 80s of the last century. Today, Uzbekistan has a huge potential for scientific, technical and experimental personnel and the country has accumulated a large amount of design and technological developments in the design using of solar energy.

The International Solar Energy Institute which established in 2015 in Tashkent on the basis of the Physics-Sun Research and Production Association in cooperation with the Asian Development Bank being expected to become a regional center for scientific and experimental research. The results of these studies can be used as promising technologies for the use of solar energy. Five or six years ago, Uzbekistan set a goal to build several more high-efficiency, high-tech solar power plants. To this end, in cooperation with the Asian Development Bank, the most modern measuring stations have been installed in several regions of Uzbekistan, and all the information necessary for the preparation of well-designed projects is being collected.

It should be noted that Uzbekistan has rich reserves of raw materials for the production of photovoltaic modules and other equipment used in solar energy. In 2014, a plant for the production of technical silicon with an annual capacity of 12,000 tons was commissioned in our country in cooperation with

**ISSN:** 2776-1010 Volume 2, Issue 6, June, 2021

the South Korean company “Neoplant”. In recent years, the construction of a second silicon plant with an annual capacity of 5,000 tons with the participation of the Korean company Shindong Enerkom has been completed in the Angren Special Industrial Zone. This product can serve as a source of raw materials for the production of high-efficiency photovoltaic solar panels. In 2014, large companies from the People's Republic of China established enterprises producing photovoltaic panels with an initial capacity of 50 megawatts in the Navoi Free Industrial and Economic Zone, and 50,000 solar heat collectors per year in the Jizzakh Special Industrial Zone.

In Uzbekistan, great attention is paid to the widespread introduction of solar energy in the domestic, housing and communal services, private homes, the formation of the necessary production and service capabilities. It is estimated that the widespread use of such technologies will reduce the energy load on the country's energy system by 2 billion kilowatt-hours and provide about 2 million gigacalories of heat generation locally. That's more than $ 250 million a year in energy savings. In recent years, 1,300 secondary schools and vocational colleges, mainly in remote and inaccessible areas, have been provided with solar collectors on a pilot basis. Photoelectric panels have been installed in more than 600 rural health posts.

At this stage, the problem of using solar energy is moving steadily from scientific research and experimental development to their practical application. Solar energy, like other forms of renewable energy, is becoming more competitive, one of the purest forms of energy, methods and means of obtaining energy.

The analysis of the assessment of the total and technical potential of renewable energy sources in Uzbekistan leads to the following conclusions: the availability of a number of renewable energy sources throughout the country, its environmental safety, satisfactory energy resources, national shows the need for a radical overhaul of energy use strategies, both in the short and long term.

The government is paying more attention to the transition of sectors of the national economy to a low-carbon state. This direction will contribute to reducing energy consumption and production costs in the country. Issues on this topic were discussed at a press conference at the Ministry of Finance of the Republic of Uzbekistan. It was noted that increasing energy thriftiness and efficiency will allow save a large amount of primary energy sources, especially natural gas. Investments in these areas are relevant not only for their economic benefits but also for their environmental benefits.

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