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ALTERNATÍV ENERJÍDƏN İSTİFADƏNİN SƏMƏRƏLİLİYİNİN NƏZƏRİ-KONSEPTUAL ƏSASLARI

Xülasə

Məqalədə ölkənin təbii sərvətlərdən, iqtisadi resurslardan səmərəli istifadə edilməsi, milli iqtisadiyyatın strukturunun şaxələndirilməsi, onun istehsal sahələrinin genişləndirilməsi, rəqabətqabiliyyətliliyi və ixrac təyinatlı məhsulların çeşidinin artırılması, dünya iqtisadi proseslərinə inteqrasiyasının sürətləndirilməsi, milli iqtisadiyyatın yüksəldilməsi, o cümlədən ölkənin dünya ölkələri içərisində layiqli yer tutması geniş təhlil edilmişdir. Bu baxımdan, ölkənin zəngin iqtisadi resurslarından səmərəli istifadəni təmin etməklə, iqtisadi inkişaf proseslərinin intensivləşdirilməsi potensialına malik olması xüsusi əhəmiyyət kəsb edir.

Açar sözlər: Alternativ enerji, təbii sərvətlər, milli iqtisadiyyat, iqtisadi resurs, rəqabətqabiliyyətlilik

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Intradaction

In modern times, the rapid development of industry and agriculture, the increase in the population and the increasing standard of living of people are increasing the demand for energy used in the household day by day. The decline in natural resources of fuels, the instability of their prices for various reasons, the harm caused to the environment in the process of their burning, including the "greenhouse effect", etc. such factors have led to the need to search for alternative energy sources. Since the use of regenerative - renewable energies as alternative energy sources is more environmentally efficient, research of their sources, ways to use them, their impact on nature, etc.are carried out. such issues have become quite relevant at the present time. Alternative sources of regenerative energy have the ability to provide people with various types of energy in an infinite period of time[3]. Oil, gas, hard coal, peat, etc. since regenerative energies were not important when fuels were abundant and cheap, there was also little interest in using them. Because the use of regenerative energies was significantly more expensive than other energy carriers.

Analiz

At present, however, conditions have completely changed in favor of regenerative energies. Devices used in regenerative energy systems have been improved, new, cheap and high-quality materials needed for these purposes have been created, automation and control mechanisms have been updated, and attention to cleanliness environmental has dramatically. Thus, the use of regenerative energies has become cheaper, and the use of organic and non-organic fuels has become more expensive[4]. Therefore, attention and interest in the use of regenerative energy sources has increased, and the attitude to this area has completely changed. In order to stimulate the use of regenerative energy sources in various states, special programs have been developed and begun to be implemented.

For hundreds of years, the energy factor has retained its place among the most important and fundamental resources in the continuation of human existence. Today, this factor continues to maintain its importance and plays a key strategic role in the development of countries. To date, traditional energy sources have met most of the



energy needs. However, due to the fact that not every country has access to these resources, imports, exports and transit require high funding, the gradual reduction of resources and the damage caused to the environment, the need for new resources in energy production has multiplied. Due to the limited energy resources, each country faces the problem of energy security.

The emergence of the concept of "energy security", a product of scientific research of recent decades, has not found its explanatory expression in a single conceptual sense, although it has been evaluated from separate aspects over the entire historical period. Today, this factor continues to maintain its importance and plays a key strategic role in the development of countries. To date, traditional energy sources have met most of the energy needs. However, due to the fact that not every country has access to these resources, imports, exports and transit require high funding, the gradual reduction of resources and the damage caused to the environment, the need for new resources in energy production has multiplied. Due to the limited energy resources, each country faces the problem of energy security.

The renewable type of energy has come to the fore in energy production as an alternative to non-renewable energy. The ability of all states to meet a certain part of their energy needs at their own expense was welcomed, but the production of renewable energy has not spread throughout the world and has not reached the desired size[3]. However, it would not be wrong to say that after a certain time, the role of renewable energy will increase significantly. The use of renewable energy sources is also of considerable importance in terms of Environmental Protection.

Renewable energy is naturally shifted to the central plan, as new alternative energies need to be less polluting than the sources they replace. Renewable energy sources that have existed for at least four decades have become increasingly widespread as a conceptual alternative to centralized energy sources (e.g. coal, nuclear energy), which are considered environmentally destructive and inhumane. Traditional energy sources include coal, oil, natural gas and nuclear fuel, while renewable energy sources include

water, solar, wind, biomass energies and geothermal energy.

Since the beginning of the 1990s after the independence, restoration of its implementation of the oil strategy has made it possible to form a new potential for the development of the national economy. The development and expansion of oil and gas resources created conditions for the export of our country's resources in this area to world markets, the implementation of major projects at the regional and international levels was possible, the country's infrastructure was updated and a production network was formed at the expense of modern, high technologies, prospects for diversification of the National - additional incentives have emerged for more efficient use of human resources, and a reliable and productive source of the country's financial resources has been formed[3].

At the same time, the national resources and resources of each country stipulate the protection of certain national interests, its economic security, the organization of the maximum efficient use of resources, the implementation of the economy regime associated with them, the development and implementation of various models and mechanisms of effective use of resources.

At the same time, since economic resources have the characteristics of depletion, it becomes necessary to solve the problems of sustainable and efficient use of these resources in a long-term period of their use.

Result

It is from this point of view that in connection with the elimination of the above-mentioned existing problems and the intensification of oil production, it was necessary to ensure the maximum use of resource potential. At the same time, instability in oil prices on World Markets makes it necessary to form sources of foreign exchange funds entering the country at the expense of the development of other sectors of the economy. Taking into account all these factors, the development resources of the country's economy and the improvement of their effective use are among the most important issues of the day.

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Formation of an adequate scientific view of problems of improving the economic development resources and their effective use in our country, the conceptual aspects and regulatory mechanisms associated with them, the requirements of modern times . Other important scientific innovations include the following: as a result of the research, it can be concluded that the role of the use of Natural Resources in the development of the country's economy and related processes have been investigated, their specific features, important factors and problems have been systematized.

At the same time, justification of the need to improve and update economic and financial mechanisms, legal and normative acts of regulation of resource use in the country, comparative analysis of the current situation of efficient use of fuel and energy resources, objective determination of the economic resource potential of the field, selection of the optimal option using economic resources, as well as

Reference:

1. Amerkhanov R.A., Grigorash O.V., Garkaviy K.A., Bogdan A.V., Tropin V.V.

Concerning the concept of constructing combined ups systems. *Journal of Industrial Pollution Control*.2017;33(1):797-803. ISSN: 0970-2083

2.Cooper Nathanial, Horend Christian, Röben Fritz, Bardow Andre, Shah Nilay A framework for the design & operation of a large-scale wind-powered hydrogen electrolyzer hub.

International Journal of Hydrogen Energy. 2022;47(14):8671-8686. ISSN 0360-3199. DOI: https://doi.org/10.1016/j.ijhydene.2021.12.225.

- 3.R.N.Nuraliyeva" economic environmental problems of the development of the fuel energy complex of Azerbaijan " monograph. Baku-Azernashr-2010, BBK 6.1 N 89 M 651(07)2010 0601000000.P.221
- 4. Mayis G. Gülaliyev, Rahima N. Nuraliyeva, Ruhiyya A. Huseynova, Firudin E. Hatamov, Alikhanli S. Yegana, Elvin S.

Abdullayev Assessing the Impact of the Oil Price Shocks on Economic Growth in Oil-Exporting Arab CountriesAssessing the Impact of the Oil Price Shocks on Economic Growth in Oil-Exporting Arab Countries. WSEAS TRANSACTIONS on BUSINESS and ECONOMICS DOI: 10.37394/23207.2022.19.42

- 5. Chasov I.S., Kholkin D.V., Burdin I.A., Tertyshnaya A.I. Prospects of Russia in the global hydrogen fuel market. Energy Expert. 2019;2(70);18-22. ISSN: 2075-6518.
- 6. Lebrouhi B.E., Djoupo J.J., Lamrani B., Benabdelaziz K., Kousksou T. Global hydrogen development A technological and geopolitical overview. *International Journal of Hydrogen Energy*. 2022;47(11):7016-7048. ISSN 0360-3199, DOI: https://doi.org/10.1016/j.ijhydene.2021.12.076.
- 6.PetkovIvalin, Gabrielli Paolo Power-to-hydrogen as seasonal energy storage: an uncertainty analysis for optimal design of low-carbon multi-energy systems. Applied Energy. 2020; 274: Article115197. ISSN 0306-2619. DOI https://doi.org/10.1016/j.apenergy.2020.115197.

7.Tang Ou, RehmeJakob, Cerin Pontus, Huisingh Donald Hydrogen production in the Swedish power sector: Considering operational volatilities and long-term uncertainties. *Energy Policy*. 2021;148(Part B): Article 111990. ISSN 0301-4215. DOI: https://doi.org/10.1016/j.enpol.2020.111990.

Мамедова Гюльнара. Функция спроса в электроэнергетическом секторе Азербайджана для домохозяйств// Экономика и предпринимательство журнал. Москва, № 5 (106) 2019 г. Vol. 13 Nom. 5

Мамедова Гюльнара. Модели ценообразования в электроэнергетическом сектор // Azərbayca Milli Elmlər Akademiyasının "Elmi Əsərlər", 2017 №5 (sentyabr-Oktyabr)



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ТЕОРЕТИКО-КОНЦЕПТУАЛЬНЫЕ ОСНОВЫ ЭФФЕКТИВНОСТИ ИСПОЛЬЗОВАНИЯ АЛЬТЕРНАТИВНОЙ ЭНЕРГИИ

Резюме

В статье широко анализируются вопросы рационального использования природными ресурсами, экономическими ресурсами страны, диверсификации структуры национальной экономики, расширения ее производственных мощностей, конкурентоспособности и расширения ассортимента продукции экспортного назначения, ускорения ее интеграции в мировые экономические процессы, подъема национальной экономики, в том числе занимающей достойное место среди стран мира. В связи с этим особое значение имеет тот факт, что страна обладает потенциалом интенсификации процессов экономического развития, обеспечивая рациональное использование своих богатых экономических ресурсов.

Ключевые слова: альтернативная энергетика, природные ресурсы, национальная экономика, экономические ресурсы, конкурентоспособность

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THEORETICAL AND CONCEPTUAL FOUNDATIONS OF THE EFFICIENCY OF ALTERNATIVE ENERGY USE

Abstract

The article extensively analyzes the issues of rational use of natural resources, economic resources of the country, diversification of the structure of the national economy, expansion of its production capacities, competitiveness and expansion of the range of products for export purposes, acceleration of its integration into world economic processes, the rise of the national economy, including occupying a worthy place among the countries of the world. In this regard, the fact that the country has the potential to intensify the processes of economic development, ensuring the rational use of its rich economic resources, is of particular importance.

Keywords: alternative energy, natural resources, national economy, economic resources, competitiveness