

ISSN 2518-1467 (Online),
ISSN 1991-3494 (Print)

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ

Х А Б А Р Ш Ы С Ы

ВЕСТНИК

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК
РЕСПУБЛИКИ КАЗАХСТАН

THE BULLETIN

THE NATIONAL ACADEMY OF SCIENCES
OF THE REPUBLIC OF KAZAKHSTAN

PUBLISHED SINCE 1944

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SEPTEMBER – OCTOBER 2020

ALMATY, NAS RK

NAS RK is pleased to announce that Bulletin of NAS RK scientific journal has been accepted for indexing in the Emerging Sources Citation Index, a new edition of Web of Science. Content in this index is under consideration by Clarivate Analytics to be accepted in the Science Citation Index Expanded, the Social Sciences Citation Index, and the Arts & Humanities Citation Index. The quality and depth of content Web of Science offers to researchers, authors, publishers, and institutions sets it apart from other research databases. The inclusion of Bulletin of NAS RK in the Emerging Sources Citation Index demonstrates our dedication to providing the most relevant and influential multidiscipline content to our community.

Қазақстан Республикасы Ұлттық ғылым академиясы "ҚР ҰҒА Хабаршысы" ғылыми журналының Web of Science-тің жаңаланған нұсқасы Emerging Sources Citation Index-те индекстелуге қабылданғанын хабарлайды. Бұл индекстелу барысында Clarivate Analytics компаниясы журналды одан әрі the Science Citation Index Expanded, the Social Sciences Citation Index және the Arts & Humanities Citation Index-ке қабылдау мәселесін қарастыруда. Web of Science зерттеушілер, авторлар, баспашылар мен мекемелерге контент тереңдігі мен сапасын ұсынады. ҚР ҰҒА Хабаршысының Emerging Sources Citation Index-ке енуі біздің қоғамдастық үшін ең өзекті және беделді мультидисциплинарлы контентке адалдығымызды білдіреді.

НАН РК сообщает, что научный журнал «Вестник НАН РК» был принят для индексирования в Emerging Sources Citation Index, обновленной версии Web of Science. Содержание в этом индексировании находится в стадии рассмотрения компанией Clarivate Analytics для дальнейшего принятия журнала в the Science Citation Index Expanded, the Social Sciences Citation Index и the Arts & Humanities Citation Index. Web of Science предлагает качество и глубину контента для исследователей, авторов, издателей и учреждений. Включение Вестника НАН РК в Emerging Sources Citation Index демонстрирует нашу приверженность к наиболее актуальному и влиятельному мультидисциплинарному контенту для нашего сообщества.

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«Қазақстан Республикасы Ұлттық ғылым академиясының Хабаршысы».

ISSN 2518-1467 (Online),

ISSN 1991-3494 (Print)

Меншіктенуші: «Қазақстан Республикасының Ұлттық ғылым академиясы»РҚБ (Алматы қ.).

Қазақстан Республикасының Ақпарат және коммуникациялар министрлігінің Ақпарат комитетінде 12.02.2018 ж. берілген № 16895-Ж мерзімдік басылым тіркеуіне қойылу туралы куәлік.

Тақырыптық бағыты: *іргелі ғылымдар саласындағы жаңа жетістіктер нәтижелерін жария ету.*

Мерзімділігі: жылына 6 рет.

Тиражы: 2000 дана.

Редакцияның мекенжайы: 050010, Алматы қ., Шевченко көш., 28, 219 бөл., 220, тел.: 272-13-19, 272-13-18,
<http://www.bulletin-science.kz/index.php/en/>

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Типографияның мекенжайы: «NurNaz GRACE», Алматы қ., Рысқұлов көш., 103.

Г л а в н ы й р е д а к т о р
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«Вестник Национальной академии наук Республики Казахстан».

ISSN 2518-1467 (Online),

ISSN 1991-3494 (Print)

Собственник: РОО «Национальная академия наук Республики Казахстан» (г. Алматы).

Свидетельство о постановке на учет периодического печатного издания в Комитете информации Министерства информации и коммуникаций и Республики Казахстан № **16895-Ж**, выданное 12.02.2018 г.

Тематическая направленность: *публикация результатов новых достижений в области фундаментальных наук.*

Периодичность: 6 раз в год.

Тираж: 2000 экземпляров.

Адрес редакции: 050010, г. Алматы, ул. Шевченко, 28, ком. 219, 220, тел. 272-13-19, 272-13-18.

<http://www.bulletin-science.kz/index.php/en/>

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Адрес типографии: «NurNazGRACE», г. Алматы, ул. Рыскулова, 103.

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Bulletin of the National Academy of Sciences of the Republic of Kazakhstan.

ISSN 2518-1467 (Online),

ISSN 1991-3494 (Print)

Owner: RPA "National Academy of Sciences of the Republic of Kazakhstan" (Almaty).

The certificate of registration of a periodical printed publication in the Committee of information of the Ministry of Information and Communications of the Republic of Kazakhstan No. **16895-Ж**, issued on 12.02.2018.

Thematic focus: *publication of the results of new achievements in the field of basic sciences.*

Periodicity: 6 times a year.

Circulation: 2000 copies.

Editorial address: 28, Shevchenko str., of. 219, 220, Almaty, 050010, tel. 272-13-19, 272-13-18,

<http://www.bulletin-science.kz/index.php/en/>

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Address of printing house: «NurNaz GRACE», 103, Ryskulov str, Almaty.

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**THE ROLE OF INTERNATIONAL ORGANIZATIONS
IN THE STIMULATION SYSTEM OF THE ALTERNATIVE
ENERGETICS DEVELOPMENT**

Abstract. The article focuses on the rapid increase in the role of the system of stimulation tools in the alternative energetics development in a context of the process of comprehensive greening of the modern world economy. The problems of the category determination of "stimulation" are reviewed both in modern legal science in general and in the field of international legal relations related to the development of alternative energetics. The incentive means of the development of alternative energetics, used at the domestic level, which are most widely used at the present stage of social development, are clarified. The main content of the work touches upon urgent problems of the role of international organizations in the stimulation system of the alternative energetics development. The importance of their participation in ensuring the sustainable development of the industry under study is substantiated, their role and function in the stimulation system of the alternative energetics are determined, and a classification of their activities is proposed. The tasks of governmental and non-governmental international institutions are analyzed in terms of the proposed classification; the examples are given from the practical implementation of tasks by several major international organizations. The options are proposed for improving the present model for the participation of international organizations with the stimulation system of the alternative energetics development. The focus is made on the problem of the states' international responsibility for non-compliance with international treaties and the problem of priority correlation of international interest and state sovereignty in matters of reducing CO₂ emissions into the atmosphere. It is concluded that there is a current trend of reorienting the activities of international organizations towards differentiation. It is stated that the programs and recommendations of international organizations are developed directly for particular states, taking into account their geography and economic status when choosing types and methods for the alternative energetics development.

Key words: alternative energy, renewable energy sources, energy policy, stimulation of the alternative energetics development, international support, international organizations.

Introduction. Today, it can be said that a rapid increase in the number of scientific publications devoted to the problems of the alternative energetics development. The revival of scientific interest in this topic is not surprising. The global fossil fuel depletion, increase in the volume of carbon dioxide in the atmosphere associated with the use of hydrocarbons in human activities, increase in the interest of sovereign states in ensuring national energy security - all these and other factors have made the task of the alternative energetics development a priority for the world community.

The adoption of the Paris Climate Agreement in 2015, which served as a historic event uniting the efforts of all world powers to suppress climate change, played an important role in this issue mainstreaming. Once again the agreement emphasizes the importance of opening to a new, low-carbon model of economic development based on the gradual abandonment of traditional technologies for the extraction, processing and use of fossil fuels (primarily hydrocarbon raw materials) in favour of green technologies. It is important to emphasize that replacing the Kyoto Protocol of 1997, which was then in force, and established quotas for greenhouse gas emissions, the new international document, unlike its

forefather, changed the approach to differentiating the responsibilities of states that fail to fulfill obligations under the Treaty. In addition, based on an analysis of the provisions of the Paris Agreement, it can be stated that the role of the incentive mechanism aimed at encouraging states and economic entities for their successful greenhouse gas emission can be significantly increased [See 1].

The need to improve the existing incentive mechanism for the alternative energy source is also confirmed by the fact that, despite the international community's clean energy policy, hydrocarbon energy remains a priority. We agree with the American ex-president B. Clinton, who answered the question why alternative energetics are growing so slowly: "The existing oil and coal-based energetics is well organized, well-funded and has good political contacts, while the new energetics is decentralized, and lacks finances and is less influential" [2]. Despite the fact that the expression is more than 10 years, it does not lose its relevance today.

There is no doubt that the effectiveness of international programs for the development of alternative energetics depends not only on the level of effectiveness of the energy policies of the participating states (fulfillment of the obligations incurred), but also largely on the success of international organizations assisting them. It is not enough to officially declare the vector of the world economy greening, it is necessary to comprehensively and constantly ensure this process, which, in turn, requires providing feedback between states and international organizations on the alternative energetics development.

Analysis of recent researches and publications. Despite the significant interest in the studied problems, there are almost no scientific works on the participation of international organizations in the stimulation system of the alternative energetics development. The main emphasis in recent years has been mainly focused on the consideration of the system of ways to nationally stimulation of the studied sphere development, often leave aside the importance of the role of international organizations in this process, and therefore the topic remains poorly investigated and relevant. Indirectly, the problems of the participation of international organizations in the stimulation system of the alternative energetics development touch the works of V.A. Barinova, S.V. Venediktov, T.A. Lanshina, I.P. Povarich, B. Proshkin, S.V. Ratner, Yu.V. Tikhonravov and others.

The purpose of the article is to determine the role of international organizations in the stimulation system of the alternative energetics development in the world.

Main results of the study. It should be noted that in spite of a rather large array of scientific studies devoted to the stimulation problem, a unified approach to understanding the content of "stimulation" itself as a legal category in juridical sciences has not yet been formed. For example, from Yu.V. Tikhonravova's point of view, legal stimulation is divided into negative means (prohibitions, duties, penalties, etc.) and positive means (permits, benefits, merits, etc.) [3, p.190]. S.V. Venediktov, B. Proshkin, I.P. Povarich and many others also stand similar ground [4, p. 312-313]. The second group of scientists argues that the category "incentive" covers only positive means of influence and that it should not include measures related to restrictions [5, 51-52].

To solve the problem of determining the content of the "stimulation" category, we consider it necessary to refer to its etymological origin. So, the term "stimulation" comes from the Latin "stimulus", literally - "a pointed stick with which animals were prod" [6, p. 647]. As we see, the nature of the term origin itself includes coercive means. However, it should be noted that with social development, the interpretation of the word "stimulus" ("stimulation") has undergone changes. Perceiving the word "stimulus", on the subconscious level we endow it only with positive signs, interpreting it only as a positive motivation, which enhances the desire to carry out certain activities, while the term "responsibility" (coercion) is associated with a negative aspect, offence of law, punishment. In the case of using coercive (negative) means, increasing desire in a stimulated subject is reversible. In this case, motivation comes from the desire to distract (prevent) the onset of certain negative consequences, while the overall goal of stimulation -to encourage the subject to perform certain actions, is preserved. Therefore, in our opinion, it is necessary to assign both positive and negative measures of influence to the system of stimulating means. Although it should be noted that in recent years, positive ways of stimulation are considered to be more desirable, effective.

Considering the simulation mechanism through the lens of international legal relations related to alternative energy, it is also advisable to report on the existence of an integrated approach to understanding the scope of the studied category. Although the frequent mention of the term in various Resolutions, Directives, Conventions, Decisions of international organizations and their bodies [See, for

example, 7, 8, 9] does not disclose the definition of stimulation but gives reason to argue about the possibility of applying liability measures to the stimulated subject.

Today, society knows numerous ways to positively stimulate green energy development. Moreover, the list of means of the incentive system has no restrictions on the part of supranational organizations. So, according to paragraph k of Art. 2 of the Directive of the European Parliament of the Council of the European Union 2009/28 /EC “On the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC” dated April 23, 2009: “‘Support scheme’ means any instrument, scheme or mechanism applied by a Member State or a group of Member States, that promotes the use of energy from renewable sources by reducing the cost of that energy, increasing the price at which it can be sold, or increasing, by means of a renewable energy obligation or otherwise, the volume of such energy purchased. This includes, but is not restricted to, investment aid, tax exemptions or reductions, tax refunds, renewable energy obligation support schemes including those using green certificates, and direct price support schemes including feed-in tariffs and premium payments” [9].

However, today the most widespread measures for introduction of special tariffs are the purchase of alternative energy; subsidization of clean energy producers; exemption from environmental taxes; concessional loans and special grants; development of joint ventures and cooperation between electric companies and companies producing power supply units; creation of green energy certification systems; conducting popularization aimed at public support for alternative energy; implementation of “pilot” and demonstration projects of renewable energy sources, financing of educational programs, educational programs in the field of alternative energy, and many others. etc. [For more information on modern means of stimulation used at the state level, see 10,11,12].

It should be noted that in the realm of choosing an arsenal of stimulation tools for alternative energetics, each specific country has its own approach. For example, Denmark, Belgium and Sweden prefer the construction of more power plants, which use biofuels instead of coal or other fossil resources. The UK maintains subsidies for both CHP plants that use pellets in conjunction with coal, and for pure biofuel power plants at the same level, unlike Germany, which subsidizes only biofuel power plants. And the Netherlands stopped supporting the use of biofuels at all, hoping to continue its use without subsidies. Beyond that they legally obligated power plants to produce a certain share of energy from renewable sources [13, p.9].

Despite the fact that the capital contribution to the implementation of international programs to support alternative energetics is carried out at the domestic level, the degree of participation of international organizations should not be underestimated. They are one of the main coordinators and associates of the development of clean energy in the world. Assisting the states parties to international treaties, the role of international organizations in stimulating the development of alternative energetics mainly comes down to creating favourable conditions for the first strategies to switch to green energy, creating a platform for interstate cooperation, technology exchange, etc. The monitoring function of international organizations should be mentioned separately in the context of the implementation of the standards and requirements established by international legal acts.

The current activities of international organizations in the field of stimulating the development of alternative energetics can be divided into the following areas from our point of view: 1). Facilitation of independent states, national public administration bodies and civil organizations in terms of choice and optimization of incentive mechanisms for alternative energy sources; 2). Comprehensive support for research and economic international cooperation in the development of technologies related to alternative electricity. Collection of statistical data and promotion of the idea of the need to switch to green energy for the world community; 3). Direct participation in the role of a stimulating entity through investment, insurance and the use of other financial instruments; 4). Ensuring the fulfillment of obligations undertaken by the member states to international treaties through monitoring and application of legal liability measures.

It should be stated that international organizations in their diversity in most cases can perform both several specified areas of activity and can be highly specialized. Let's consider the main international organizations whose functional purpose is associated with the development of alternative energetics.

The International Renewable Energy Agency (IRENA) has currently a leading role in the development of the "green" energy among international organizations. As a universal intergovernmental

organization, whose Charter was signed in 2009 [14] and entered into force in 2010, with more than 100 countries and the European Union as members, IRENA provides a wide range of products and services to accelerate the pace of widespread and sustainable use of renewable energy sources all over the world. In the interests of its members, the Agency has a significant amount of authority, among other things: execution of national programs for the introduction of renewable energy technologies; support of education, training and dissemination of information on renewable energy sources; organization of training for administrators, technicians and specialists for small and medium-sized energy enterprises; joint creation of regional centres for research, development and exchange of experience; assessment and analysis of information about the technologies used and development of practical recommendations; planning of financial support of renewable energy programs; data collection and compilation of statistics, etc. [See 14] In recent years, IRENA has made significant contributions to conducting readiness evaluation of renewable energy performed in partnership with governments and regional organizations to ensure the exchange of subject studies and best practices. The Agency has taken numerous measures aimed at promoting planning in the field of renewable energy sources at the regional level, and various country reviews on the problems of the state energy sector were presented to the public [15]. In particular, the Global Atlas for Renewable Energy has been developed, which is available on the website and displays the geography of solar and wind energy sources by country.

Apart from IRENA, the International Energy Agency (IEA) is responsible for the sustainable development of alternative energetics. The Agency was originally created by the countries of Western Europe together with the USA and Japan as a counterweight to OPEC during the oil crisis of 1973-1974 and was intended to help the energy security ensuring of the participating countries by reducing dependence on oil. One of the ways to achieve the organization's main objective was the development of alternative energy sources.

Today it is an autonomous intergovernmental organization that makes a significant contribution to the global dialogue by providing authoritative statistics, analysis and recommendations in the field of energy. The IEA acts as a policy adviser to its member states. The International Energy Agency provides support for international research, development, deployment of energy technology systems and knowledge transfer through multilateral groups. It stimulates many technological initiatives in renewable energy sectors such as bioenergy, climate technology initiatives, geothermal energy, hydrogen technology, hydropower, ocean energy, photovoltaic cells, widespread adoption of solar heating and cooling, solar energy concentration and wind energy. Though energy security remains the organization's key focus, the IEA is currently focusing on clean energy technologies. The activities are carried out in the following three main areas in the field of "green energy": 1) assessment of the status and progress of renewable energy technology, 2) changes in the market and in politics, and 3) system and market integration [16]

The United Nations Industrial Development Organization (UNIDO) is actively involved in the UN-Energy project in the development of the Sustainable Energy for All initiative. For today, UNIDO implements more than 50 renewable energy sources in 35 countries and plans to implement about twenty more. The Organization's program for the development of renewable energy sources contributes to the expansion of productive or revenue-generating activities and ensuring growth through the use of renewable energy sources in industrial production, in particular in small and medium-sized enterprises. In addition, the Organization implements a number of measures to create opportunities for the development of entrepreneurship in the field of research [17].

To increase the effectiveness of international cooperation by the intergovernmental Agreement on the coordination of interstate relations in the field of the CIS electric power was created by the CIS Electric Power Council on February 14, 1992. Currently, the principal directions of the Council's activity include promoting the formation of an energy-efficient interstate policy through coordinated actions in the field of economic and scientific-technical cooperation, developing and implementing joint projects on the use of advanced technologies in the field of energy conservation, non-traditional energy sources developing, as well as coordinating work on preparation and coordination of standards and rules in the construction and operation of electric power facilities, assistance in the development and implementation of joint environmental programs, recommendations for energy conservation in the field of electricity. It is noteworthy that a working group on the use of renewable energy was created and an action plan for 2019-2021 was adopted at the 53rd meeting of the Council in November 2018. This plan, among other

things, provides for the creation of an information resource on renewable energy sources, as well as the creation of training programs for training specialists in this industry [18].

An important role in the stimulation system of the alternative energetics development is played by international non-governmental organizations. Environmental INGOs (for example, Greenpeace International, Worldwide Fund for Nature, Friends of the Earth and others) have been actively and sometimes very successfully lobbying for green energy at the government and interstate levels. Exerting pressure on the more influential and powerful factors of the world political system in order to change environmental policies, without exaggeration, has a real impact on the solution of a number of global mankind problems [19, p.56-57].

The EUROSOLAR, INFORSE and the Renewable Energy and Energy Efficiency Partnership need to be stressed over among international non-governmental organizations involved in the development of alternative energy sources. The principal direction of these organizations' activity, in addition to lobbying for the interests of green energy (for example, EUROSOLAR took an active part in the creation of IRENA [20, p. 11-16]), is educational activities and activities on organization and holding of various thematic seminars and conferences on the use of alternative energy sources, the issuance of scientific publications, study tours holding, etc. In addition, international non-governmental organizations are developing business models to develop clean energy and the provision of methodological assistance in the implementation of projects. It is important to note that precisely because the active participation of the INFORSE organization, the national concepts and strategies were prepared aimed at the transition to a balanced energy system. Currently, the concepts are developed for the EU, Denmark, Ukraine, Slovakia, Belarus, Poland and Romania.

Direct participation in the role of a stimulating entity through investment, insurance and the use of other financial instruments is carried out by the international financial institutions. Thus, the Council of Europe Development Bank (CEB) has been developing cooperation relations with other multilateral organizations over the past few years. In this context, in addition to its organic relations with the Council of Europe, CEB has become a very valuable partner for the EU and regularly cooperates with other IFIs, as well as with a number of specialized UN agencies in areas of common interest. For example, the Bank created the coordination structure of the Western Balkans Investment Framework (WBIF) designed to facilitate access to European funding for the region. Specifically, in the field of energy, the CEB in 2011 created the CEB-ELENA (European Local Energy Assistance) mechanism, which provides grants to government agencies that want to develop investment projects in the field of energy efficiency and renewable energy sources. Today, CEB-ELENA covers up to 90% of the costs of technical assistance meeting the criteria set for the preparation and implementation of projects. Most recently, the bank allocated a grant for the development of the project and the construction of a new centralized heat supply system in Montenegro, based on biofuels. The CEB is currently participating in the project of developing a wind farm in Bosnia and Herzegovina [21]. The European Bank for Reconstruction and Development contributes to the creation of favorable conditions for investments in renewable energy sources.

The Bank worked with such countries as Kazakhstan and Ukraine and the countries of the Western Balkans in the development of legislation on renewable energy sources, which contributed to the development of sustainable renewable energy. The Bank invested more than 420 million euros in biomass and wind energy development in Poland, and in Turkey - where the Bank has been operating since 2009 - the EBRD finances renewable energy sources that can already provide home lighting for 4 million people. So, in 2018, the Bank allocated 102 million US dollars for the implementation of projects for the construction of four wind and nine solar power plants [23]. The EBRD also grants credits to small and medium-sized renewable energy projects through its Sustainable Energy Financing Facilities.

Along with the designated financial instruments, insurance is also widely used in the mechanism for stimulating the development of green energy. For example, the Multilateral Investment Guarantee Agency guarantee 917 million US dollars in climate finance in 2018, 75 per cent whereof was used to support renewable energy sources [22].

Conclusions. One of the important aspects of stimulation of the alternative energy sources development is ensuring the fulfillment by states of their obligations under international agreements. It should be stated that the problem of international responsibility of states is one of the most difficult in international law and does not have a clear solution in the interstate relations practice. The priority

correlation challenge of international interest and state sovereignty remains open to this day. Moreover, supranational monitoring mechanisms are often in practice less than effective and turn into statistics collection missions.

It is also peculiar to the institution of international environmental responsibility that only a few international conventions, treaties and agreements provide for liability measures. In addition, they do not always establish specific sanctions for environmental violations, and the procedural order for holding liability is poorly specified. At the same time, it is important to note that international law does not contain measures of responsibility for failure to fulfil or improper fulfillment of programs for the development of alternative energetics. Alternative energy sources transition is not established by a strict imperative. However, in a number of international documents devoted to environmental problems, namely, concerning its pollution, liability is sufficiently detailed. A vivid example is the mechanism of holding countries liable for environmental violations in the field of peaceful atom use.

The conducted analysis of the tasks of international organizations in the field of the development of alternative energetics and the practice of their implementation in recent years suggests that at present there is a tendency to refocus the activities of international organizations in the direction of differentiation. Increasingly frequently, the programs and recommendations of the International society are developed directly for specific states, taking into account their geography and economic status when choosing types and methods for the development of alternative energy sources. Besides, the interest in the problem of alternative energetics in scientific circles is significantly increasing, as evidenced by the increase in the number of conferences held at the international level in this field. The principal role of international organizations in the system of the alternative energetics stimulation remains, paradoxical as it may sound, to stimulate the main subjects of stimulation (that is, states parties to international treaties), which, in turn, possessing a whole arsenal of tools, and bring into action the global idea of transition to green energy. In fact, all the activities of international organizations in this field are reduced to a single global goal - to create the most favourable conditions to simplify the complex process of transition of sovereign states to alternative energy sources, to increase the interest of the latter in its widespread use.

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БАЛАМА ЭНЕРГЕТИКАНЫ ДАМЫТУДЫ ҢНТАЛАНДЫРУ ЖҮЙЕСІНДЕГІ ХАЛЫҚАРАЛЫҚ ҰЙЫМДАРДЫҢ РӨЛІ

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РОЛЬ МЕЖДУНАРОДНЫХ ОРГАНИЗАЦИЙ В СИСТЕМЕ СТИМУЛИРОВАНИЯ РАЗВИТИЯ АЛЬТЕРНАТИВНОЙ ЭНЕРГЕТИКИ

Аннотация. В статье акцентируется внимание на стремительном повышении роли системы стимулирующих инструментов в сфере развития альтернативной энергетики в контексте процесса всесторонней экологизации современной мировой экономики. Рассматриваются проблемы определения содержания категории «стимулирования» как в современной юридической науке в целом, так и в отрасли международно-правовых отношений, связанных с развитием альтернативной энергетики. Освещаются правовые механизмы стимулирования развития альтернативной энергетики, используемые на внутригосударственном уровне, которые получили наибольшее распространение на современном этапе развития общества. Основное содержание работы затрагивает актуальные проблемы роли международных организаций в системе стимулирования развития альтернативной энергетики. Обосновывается важность их участия для обеспечения

устойчивого развития исследуемой отрасли, определяется их роль и функциональное назначение в системе стимулирования альтернативной энергетики, предлагается классификация их деятельности. Анализируются задачи правительственных и неправительственных международных организаций сквозь призму предлагаемой классификации, приводятся примеры из практической реализации задач основными международными организациями. Предлагаются варианты совершенствования настоящей модели участия международных организаций в системе стимулирования развития альтернативной энергетики. Акцентируется внимание на проблеме международной ответственности государств за невыполнение международных договоров и проблеме соотношения приоритета международного интереса и государственного суверенитета в вопросах снижения выбросов CO₂ в атмосферу. Характерным для института международной экологической ответственности является и то, что лишь немногие международные конвенции, договоры и соглашения предусматривают меры ответственности. Кроме того, в них не всегда устанавливаются конкретные санкции за совершаемые экологические правонарушения, а процессуальный порядок привлечения к ответственности слабо детализирован. При этом в статье обращается внимание на то, что меры ответственности за невыполнения или ненадлежащие выполнения программ по развитию альтернативной энергетики международное право не содержит. Переход к альтернативным источникам энергии не установлен жестким императивом. Делается вывод о наличии в настоящее время тенденции переориентации деятельности международных организаций в направлении дифференциации. Утверждается, что программы и рекомендации международных организаций разрабатываются непосредственно для конкретных государств, учитывая их географию и экономическое состояние при выборе видов и способов по развитию альтернативных источников энергии. Утверждается, что основной ролью международных организаций в системе стимулирования альтернативной энергетики остается стимулирование основных субъектов стимулирования (то есть государств-участников международных договоров), которые, в свою очередь, обладая целым арсеналом инструментов, и воплощают в жизнь общемировую идею перехода на «зеленую» энергетику. Фактически вся деятельность международных организаций сводится к единой глобальной цели – созданию наиболее благоприятных условий для упрощения сложного процесса перехода суверенных государств на альтернативные источники энергии, повышения заинтересованности последних в ее широком использовании.

Ключевые слова: альтернативная энергия, возобновляемые источники энергии, энергетическая политика, стимулирования развития альтернативной энергетики, международная поддержка, международные организации.

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ISSN 2518-1467 (Online), ISSN 1991-3494 (Print)

<http://www.bulletin-science.kz/index.php/en/>

Редакторы *М. С. Ахметова, Д. С. Аленов, А. Ахметова*
Верстка на компьютере *Д. А. Абдрахимовой*

Подписано в печать 14.10.2020.
Формат 60x881/8. Бумага офсетная. Печать – ризограф.
21 п.л. Тираж 500. Заказ 5.