Project name, IRN	**AP13268757** - Organizational and economic mechanisms for the introduction of bioenergy for the sustainable development of rural areas of the Republic of Kazakhstan
Completion date	12.05.2022-31.12.2024
Project supervisor	Tasmaganbetov Aslan Bukimbayevich, PhD, c.e.s., associated professor
Report	Currently, the success of national reforms directly depends on the effectiveness, adaptability, and focus of the country on the practical implementation of Sustainable Development Goals. In 2015, the States that are members of the United Nations signed the document "Transformation of our World: the Agenda for Sustainable Development for the period up to 2030" ("Agenda 2030"), which reflects 17 Sustainable Development Goals as benchmarks for the development of the world community for the next 15 years [1]. According to Goal 7. Affordable and clean energy, all citizens should have universal access to affordable, reliable, sustainable and modern energy sources. The scientific novelty and prospects of this project consist in the development of scientific and practical provisions on the use of bioenergy to improve the social and living conditions of citizens in rural areas. Renewable energy plays an increasingly important role in Kazakhstan's energy balances due to the depletion of oil and coal resources. The share of renewable energy sources in the total volume of electricity production should be 6% by 2025 according to the National Development Plan of the country of Kazakhstan until 2025 [2], 10% by 2030 and 50% in 2050 in accordance with the Concept of the country's transition to a "green economy" [3]. To fulfill this strategic goal, it is possible to use the potential of agriculture, since Kazakhstan is a major producer of agricultural products, as a result of which organic waste is generated, which can be used as a primary resource for the production of biogas, electric and thermal energy. The use of bioenergy generation technology contributes to providing residents of remote rural settlements with local uninterrupted electricity and heat supply for household purposes. In the production of biogas and its further use, not only the growing demand of the population for additional energy sources is satisfied, but sometimes the very need for fuel and energy that are absent in certain territories. With the introduction of bioenergy, rural areas will receive the following economic benefits: the energy supply of plots with different population densities is aligned; transportation and the cost of delivering fuel to hard-to-reach villages are being reduced; additional sources of fuel competing with other types of fuel and energy are emerging; autonomous energy sources are emerging; the security of the energy system is improving.
Purpose	The aim of the project is to analyze the organizational and economic mechanism of the introduction of bioenergy for the sustainable development of rural areas
Expected results	1. Assessment of the current state of bioenergy development in rural areas of the Republic of Kazakhstan. 2. Classification of factors according to the degree of influence on the development of bioenergy in rural areas. 3. Systematization of state support tools for the introduction of renewable energy sources.

	4. Criteria for assessing the technical and economic efficiency of biogas plants. 5. A set of organizational and economic levers for the functioning of the information center for the application of bioenergy technologies. 6. An algorithm for the introduction of biogas plants at agricultural enterprises for the production of bioenergy.
Research group	*Main researcher:* Tasmaganbetov Aslan, PhD, c.e.s., associated professor, H index – 3, ScopusID: 56447104400, ORCIDID: https://orcid.org/ 0000-0003-0636-7498 Consultant*:* Yessengeldin Bauyrzhan, d.e.s., professor, H index – 4, Scopus ID: 55683958400, ORCID ID: https://orcid.org/0000-0003-4155-3616
Publications in scientific publications	1. Қазақстанның тұрақты даму мақсатына қол жеткізудегі жаңартылатын энергия көздерінің рөлі // Вестник Карагандинского университета им. А. Букетова. – Караганды, 2022. – №2. – С. 313-320 https://economy-vestnik.ksu.kz/apart/2022-106-2/27 2. Қазақстанның ауылдық аумақтарында биоэнергияның дамуына әсер ететін әлеуметтік-экономикалық факторлар // Вестник Казахского университета экономики, финансов и международной торговли. – Астана, 2022. – №3. – С. 153-159 http://vestnik.kuef.kz/web/uploads/file-vestnik/e3fa2556b82b4260e0702a802f27a29e