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DEVELOPMENT OF HOUSING AND COMMUNAL INFRASTRUCTURE OF UKRAINE IN THE CONDITIONS OF CIRCULAR ECONOMY

The current process of globalization of the world economy affects the economic life of each country. The problems caused by globalization processes necessitated the emergence and development of a new direction of development of the world economy, called the "circular economy". The circular economy involves the pursuit of economic activities aimed at energy conservation, the rational management of resources and waste, the introduction of waste-free technologies. Given the current trend of urbanization in the context of circular economy, there is a need to introduce new technologies in the development of urban housing and communal infrastructure. Housing and communal infrastructure of the city is a system for providing comfortable living for the residents of the city, which includes both the housing stock of the city and the complex of organizations and enterprises that provide the process of providing the population with quality housing and communal services. The city's housing stock is the central subsystem of housing and communal infrastructure. Questions about the condition of the housing stock, the means of maintaining it at a minimum at a satisfactory level, the provision of quality public utilities, waste management are important to maintain a level of satisfaction with the living conditions of the residents of the city and to maintain an adequate level of social security.

The peculiarities of the circular economy are the development of waste-free technologies, clean production, energy conservation, rational consumption, the rational management of waste when waste from one production is raw material for another.

Ukraine, as a country of European orientation, also joins in solving problems of formation and development of circular economy.

The problem of urbanization is one of the problems that has been addressed in the development of the circular economy. According to scientists, by 2030 two-thirds of the world's population will live in cities, the number of metropolitan areas (with a population of more than 10 million inhabitants) will increase from 20 in 2018 to 37 in 2025. The process of urbanization has been accelerating in recent years. Positive tendencies of urbanization include expansion of opportunities for social and economic development of city dwellers, creation of more comfortable living conditions for the population. However, the rapid pace of urbanization and urban expansion requires a rational approach to the development of housing and communal infrastructure and, in particular, a prudent attitude to the use of energy resources. Scientists estimate that the cost of creating a global infrastructure to meet the growing needs of urbanization will amount to \$ 41 trillion between 2005 and 2030.

Analysis of changes in statistics of the development of housing and communal infrastructure of Ukraine and the city of Kiev for the period 2011-2018 provided an opportunity to draw the following conclusions.

The total housing stock of Ukraine decreased by 8.54% over the period 2011-2018, with an average of 0.85% per capita. The number of apartments in the period under review decreased by 11.52%. The share of total living space with water supply for the period 2011-2018 increased by 3.15%, equipped with sewage by 3.09%, heating by 9.81%, hot water supply - by 8.4%, equipped with gas decreased by 0.12%. Thus, it is possible to note the slow growth of the volume of living space, equipped with communal amenities. It should be noted that the largest share, according to statistics, as of 2018, belonged to living space, equipped with gas - 83% (of the total living space) [1].

The basis of the housing and communal infrastructure of the city of Kiev is the housing stock, which as of 01.01.2020 had 11511 high-rise buildings, 103 dilapidated and 2 emergency dwelling houses. The total housing stock of Kyiv grew by 4.76% over the period 2011-2018, with an average of 3.81% per capita. The number of apartments

in the city of Kiev increased by 3.32% during the period under review. The share of total living space in the city of Kiev with water supply in the period 2011-2018 decreased by 0.81%, equipped with sewage - by 3.24%, heating - by 3.32%, gas - by 8.46%, hot water supply - by 0.82%. It should be noted that in Kyiv, the largest share, according to statistics, as of 2018, belonged to a living space equipped with water supply - 98.1% (of the total living space) [2]. An analysis of the dynamics of changes in the housing stock of the city of Kyiv for the period 2014-2018 has made it possible to draw the following conclusions. The share of the total area of the housing stock equipped with water supply in 2018 was 98.1%, sewage - 95.7%, heating - 96.1%, gas - 63.8%, hot water - 96.7%. Thus, it can be stated that the residential buildings of Kyiv residents have a sufficiently high level of communal amenities. It is advisable to pay attention to the physical condition of the utility networks of the city of Kyiv: as of 01.01.2019 in the city of Kiev, the degree of deterioration of water supply networks was 81%, sewerage networks 72%, thermal networks 66%, cable lines - 62%. The quality of municipal services provided by Kyiv residents is estimated at 2.3 points on a scale of 1-5 points [3,4]. According to the level of satisfaction with their living conditions in 2018, the residents of cities were distributed as follows: very satisfied -1,8%, satisfied - 53,8%, not very satisfied - 29,8%, not satisfied - 11,1%, very unhappy satisfied - 3,5% [4].

The results of a comparative analysis of the dynamics of changes in the housing stock of Ukraine and Kiev provided an opportunity to draw the following conclusions. In 2018, Kyiv's total living space amounted to 6.39% of Ukraine's total housing stock. On average, one inhabitant of Kyiv has an area of less than 8.01% less than one resident of Ukraine. The number of apartments in the city of Kiev is 6.33% of the number of apartments in Ukraine. The share of the total residential area of the city of Kiev, equipped with water supply, is 35.9% higher than in Ukraine as a whole; sewerage - by 35.7% higher; heating - by 26.7% higher; gas - by 19.2% lower; hot water supply is higher by 49.1% [2]. Thus, it can be stated that the residential buildings of the residents of the city of Kyiv have a higher level of communal amenities than the general housing stock of Ukraine.

The urbanization process is causing an increase in the number of cities in all countries of the world and an increase in the territories that occupy cities in the course of their development. Of course, urbanization has both positive and negative aspects. One of the negative aspects of the process of urbanization is the complication of the relationship between the built environment of the city and the environment due to environmental problems. Another problem of urbanization is the need to build large-scale infrastructure. The problem of large cities is also the presence of areas where the poor and the very poor live, often dangerous for other residents of the city. Identifying and identifying the risks posed by urban development problems will help identify the problem in a timely manner and take action to address it. When planning the financing of budget programs (on the example of the city of Kyiv), considerable attention is given to the priority of allocating funds for financing the city development activities.

Creating favorable conditions for the development of housing and communal infrastructure with the help of effective directions and tools and using foreign experience will contribute to the sustainable development of housing and communal services of Ukraine and integration into the European Union.

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