

INTRODUCTION OF LOCAL PERSPECTIVES OF INNOVATIVE APPROACHES TO IMPROVING ENERGY EFFICIENCY IN PUBLIC BUILDINGS

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Abstract: This article discusses global and local challenges in energy resource consumption driven by population growth, economic development, and environmental degradation. It emphasizes the importance of energy conservation, highlighting innovations such as eco-friendly building materials, enhanced engineering systems, and integrated technologies that significantly reduce energy usage. nima degani.

Key words: Energy efficiency, Green Building, Energy saving technologies, building materials, territorial initiatives, Monitoring and evaluation, renewable energy sources.

ПРЕДСТАВЛЕНИЕ МЕСТНЫХ ПЕРСПЕКТИВ ИННОВАЦИОННЫХ ПОДХОДОВ К ПОВЫШЕНИЮ ЭНЕРГОЭФФЕКТИВНОСТИ В ОБЩЕСТВЕННЫХ ЗДАНИЯХ

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Аннотация: В этой статье рассматриваются глобальные и локальные проблемы потребления энергоресурсов, обусловленные ростом населения, экономическим развитием и ухудшением состояния окружающей среды. В ней подчеркивается важность энергосбережения, в частности, рассматриваются такие инновации, как экологически чистые строительные

материалы, усовершенствованные инженерные системы и интегрированные технологии, которые значительно сокращают потребление энергии. нима дегани.

Ключевые слова: Энергоэффективность, зеленое строительство, энергосберегающие технологии, строительные материалы, территориальные инициативы, мониторинг и оценка, возобновляемые источники энергии.

It is known that the growth of the population on Earth and economic development are leading to an increase in the consumption of energy resources, an increase in demand for them and price.

At the same time, such a situation is caused by the erosion of the Earth's general ozone layer, pollution of the atmosphere from acidic residues, the emergence of toxic substances as a result of the occurrence of secondary chemical reactions in all layers of the biosphere, pollution of oceans, land-based water bodies surfaces and groundwater, violation of the global and territorial environmental balance and Therefore, the importance of energy conservation and efficiency will continue to increase. Work on this is being carried out in each country with an approach to aloxida.

Some changes are ignored, others are successfully introduced into production. A similar situation once happened with energy-saving window profiles, which are now widely used in construction. Sometimes they are still installed on the panels in the factory, which excludes incorrect installation and, as a result, heat loss.

Interestingly, in recent years, a proposal has been considered to take into account environmental indicators in the process of assessing the energy efficiency of the building. For example, many companies are replacing lead stabilizers on the window profile with safer materials.

An important role in improving energy efficiency is played by the materials provided for the construction of the building. For example, modern aerated

concrete blocks allow you to connect them with the most delicate seam. This reduces the risk of heat loss through the joint solution. In addition, a special glue has recently been presented, the use of which reduces any heat loss to a minimum. In most cases, they are reduced to zero.

Often innovative changes also affect the engineering systems of the building. This applies primarily to ventilation and heating systems. However, in recent years, elevators have also been evaluating energy efficiency, as energy loss has been proven to reach fifteen percent in some cases when using these devices. Experts advise to evaluate the elevators not in production, but after installation on the construction shaft. In this case, the data will be as close to reality as possible.

An energy-saving House is a building that combines very low energy consumption with a comfortable microclimate. Energy savings in such houses are up to 90%. The annual heating requirement of an energy-efficient house can be less than 15 kW per square meter. For example, in the most common design of a private house today (reinforced concrete foundation, a "warm floor" system without insulation, 1.5 brick walls with cement plaster, ordinary metal-plastic windows, roof insulation 150 mm and no supply) and exhaust ventilation with heat release) the energy consumption for heating is 110-130 kW per 1 m² per year. A building built on the basis of modern energy efficiency standards can save 40-70% of utility bills. Large amounts of energy and resources are saved. At the same time, the general indicators of temperature, favorable microclimate, air humidity are in a larger order than the generally accepted ones, and are regulated by the owner of the room. Today, there are four of the most popular ways to check the energy efficiency of buildings, consisting of those below:

1. Short-term measurement method. This style consists of a one-time measurement of the reading of one or two modernized engineering equipment in a building. In this case, the readings of other systems are analyzed based on General Statistics. As a result, the readings of new and old models are compared, the

difference is taken into account and the energy efficiency class of the building is established.

2. Continuous sequential measurement method. In this case, the auditor measures the performance of modernized engineering equipment with a certain regularity for a certain period of time. The readings of old equipment, as in the first method, are measured by statistical analytical calculations.

The final indicators will help to identify shortcomings in engineering equipment and update the system as efficiently as possible.

3. Analysis of the reading of equipment inside the building. As a rule, this is a long-lasting process that involves constantly recording the readings of all equipment in the building, on the basis of which an analytical conclusion is drawn and a certificate of energy efficiency of the building is issued.

In our country, work is also being carried out in a high way, for example, more than three years have passed since the signing of the Paris agreement on climate change. The date of signing this international document almost coincided with the approval by the Government of Uzbekistan of a joint project with our GEJ and the Ministry of construction of Uzbekistan to promote and build energy-efficient and low-carbon country houses and rural settlements. Work in this direction has been successfully carried out from 2017 to the present day, and the first high-quality results have determined a positive direction for the entire project.

In addition, within the framework of our project, a green mortgage scheme was tested in order to attract personal investments in construction in five regions of our country (Samarkand, Surkhandarya, Fergana, Khorezm and Bukhara). It is noteworthy that 800 one-story three-room houses were built not only with the insulation of the outer wall, but also with photovoltaic devices with a power of 300 Watts, as well as water heaters with a volume of 200 liters, which are powered by sunlight.

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