

## PROSPECTS FOR THE UTILIZATION OF SOLAR ENERGY IN RESIDENTIAL BUILDING CONSTRUCTION

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**Annotation:** This article shows the benefits and benefits of solar energy for the development of countries around the world. Significant cost efficiencies can be achieved in residential buildings due to the reduction of fuel consumption, the use of solar energy.

**Keywords:** Alternative Energy, Efficient Building, Solar Energy, Heating System, Sunflower Houses, Solar Homes, Energy Efficient, Solar Spectrum.

Today, the concept of "Sunny Houses" has entered our lives and the interest in it has become more and more numerous by the day. In this regard, naturally, the number of trades that interest the majority is also increasing.

So, even on cold winter days, nights and cloudy days, is the warmth of the huts maintained at the same time? Specifically, what kind of device will be installed on the roof of such houses? Sad?

Let's think as broadly as possible about the solution of these questions. It should be noted that a unique architectural and constructive solution in "sunny houses" makes it possible to retain heat without additional devices. [1] For this reason, even on cold and cloudy days, moderate harshness is maintained in the khonas for a certain time. Rain or snowfall, a sharp shift in the air, will not adversely affect this.

As you know, in the winter season, the days get shorter, and the clock rises to 8-9 hours. It is expensive to install binocular equipment for solar heating, and it is not necessary to install inconvenient equipment for the installation. The fact is that the heliotechnic requirements have been met, and the south-facing porch will convert natural light into 25–35 degrees Celsius. Therefore, in the evening and at night, the cost of hona can drop sharply. In "Sunny Houses," this aspect is mentioned separately. That is, the moderation of the khana harorat is ensured. Also, the irons used in construction work also have heat retention properties.

Especially in our villages, it is aimed to ensure that sunlight does not fall on the chimneys of houses, regardless of the direction of the streets. [2] In the early days of

what is referred to in science as a passive-solar heating system, our ancestors were widely dismissed. For example, great importance was attached to the direction of the sun in the construction of the building. To this day, in many jóyí there is a occurrence of phrases such as "kungay hóvli", "kungay house". Over time, the use of natural light as a source of energy has become more common and has become more commonplace. The fact that today the focus on "sunny houses" has ended, in particular, hundreds of thousands of such settlements have been built in the United States, European countries and other countries, and governments are seriously supporting this direction. In addition, the sharp increase in costs associated with the use of fuel in buildings necessitates a reconsideration of economic considerations in architecture. And now, arguments about how much fuel will be spent in the construction phase, and the extent of its negative impact on the environment, are thrown into the middle, and these aspects are not being discussed in the construction work. This is because in the past, the focus was on the expenditure to be allocated for construction.

The natural climate of our country is unique, especially the long duration of bad days, which makes it possible to use this precious blessing as an alternative source of energy. In particular, in 1994–1997, it was found that in a one-story building built from local raw materials (the walls are cotton) and a passive-solar heating system was installed, it was found to use less than 60 percent of thermal energy compared to old houses. [3] It is believed that several experiments have been carried out in this direction, and no creative results have been achieved. In 2007, a passive-solar heating system was introduced in a certain part of a single-storey building in Tashkent under the solaron-1 building. As a result, energy consumption decreased by 8-10 times. It turned out to be economically viable as well. By 2008, the first energy-saving "sunny houses" in Uzbekistan were built in the village of Burchmulla, Tashkent region, meeting the requirements of modern architecture and construction. The loft was made from materials that were cheaper than local builders' fees, and made from materials that were difficult to build.

So the playful porch, which is set in the house and overlooks the beautiful landscape, is able to convert sunlight into heat energy.

For example, it wasn't until December 2010 that household prices fell below 20 degrees. From December 2 to 8, the weather cooled sharply, followed by rain. He also successfully passed the test. Outside, overnight temperatures dropped to -10 degrees Celsius and did not exceed Q3 during the day. A strong candle blew from time to time. Nevertheless, the house was at a bargain of 19.5 degrees Celsius, and there was no need for additional heating. A World Bank expert, French architect Marc Bellanger, during a visit to Burchmulla, praised the "sunny houses" and said: "This building is the first building in Uzbekistan and the foundation of an energy-saving system that has no parallel in Central Asia."

It will also serve as a basement for the creation of new avalanches of eneptic-saving buildings in the future. He believes that this turbulent pill will be the same in achieving partisan efficiency.

The materials are also produced in-house. Everyone and the avoidance of them is not a moderate difficulty. In addition, the cost of building such construction complexes for the climate of our country, including the expenditure on a passive-solar heating system, will be fully compensated for for 4-5 years.

In a nutshell, the possibilities for the convenience of an economical system that converts sunlight into thermal energy in our country are invaluable, first of all, for the owners of one-storey village houses. [4]

The experience of countries that are strictly dependent on solar energy shows that they have taken steps towards a more sustainable future, including the development of a strategy for solar energy at the state level and the implementation of targeted government programs. The capacity of the sunlight flux falling into the field is perpendicular to this flux and is 150 million cubic meters above the atmosphere. km is equivalent to the solar constant located at a distance from the sun  $G_0=1.35 \text{ 3 kW/m}^2$ . This is the so-called solar cosmic radiation. Solar radiation is associated with a nuclear reaction in the sun's core, where temperatures reach 10 million °C (10 million °HH). Reaches K.

The solar spectrum consists of 3 parts:

1– Infrared radiation (wavelength greater than 0.7 microns) has an intensity of 46%.

2- ultraviolet radiation (wavelength up to 0.4 microns) – 9% intensity;

3- Visible radiation (0.4 -0.7 micron wavelength is 45% intense;

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