

## ADVANTAGES OF SOLAR PANELS

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**Abstract:** *In the reforms implemented in our country to build a new Uzbekistan, due to the development of entrepreneurship and the increase in the well-being of the population, the demand for electricity has also been steadily increasing. This article delves into the details about effective ways to achieve energy efficiency in solar panels.*

**Keywords:** *Solar panels. Solar system, advantages of solar panels, development of our country, energy resources.*

### INTRODUCTION

Alternative energy sources that meet the demand are currently solar powered equipment. This direction is developing very rapidly around the world, especially Uzbekistan is not lagging behind in this regard. As the price of electricity and other resources is rising, many people in our country are becoming more interested in solar panels. Solar panels are being installed in kindergartens, schools, enterprises, and houses. In particular, according to the 24th goal of the new development strategy of Uzbekistan for 2022-2026, the continuous supply of electricity to the economy and the active introduction of "Green economy" technologies to all sectors, to increase the energy efficiency of the economy by 20%, and to achieve this goal by 2026, electricity increasing the production rate by an additional 30 billion kWh to a total of 100 billion kWh, and saving nearly 3 billion cubic meters of natural gas per year in exchange for increasing the share of renewable energy sources to 25% by 2026. In this regard, a number of priority projects regarding the use of alternative energy in economic sectors, social sector facilities and residential areas are being implemented in our country. In particular, in 2021, for the first time, a 100 MW solar photoelectric plant was launched in the Karmana district of the Navoi region. A large solar photoelectric plant with a capacity of 100 megawatts has been put into operation in Nurabad district of Samarkand region. At the moment, the construction of a project with a capacity of 100 MW, designed to produce 360 million kWh of electricity per year and supply more than 110 thousand households with electricity, has started in the Beruni district of the Republic of Karakalpakstan. As a result, 106 million cubic meters of natural gas will be saved, and 160,000 tons of harmful gases will be prevented from being released into the atmosphere. With the saved gas, it will be possible to supply 35,000 households with gas for a year. In addition, 2 solar photoelectric plants with a capacity of 220 MW

each in Samarkand and Jizzakh regions, 2 wind power plants with a total capacity of 1000 MW in Bukhara region, and solar photoelectric plants with a capacity of 200 MW in Navoi region and 457 MW in Surkhandarya region, 2024 It is planned to build a wind power plant with a capacity of 500 MW in Navoi region. A total of 2,797 MW of electricity will be produced from the total of new capacities to be commissioned.

Depending on the geographical area, the installation of solar panels towards the south in Uzbekistan is considered a perfect installation. House roofs are considered the most optimal option for installing courtyards in residences.

There is almost no shadow on the solar panels on the roof. For large-capacity solar panels, it is recommended to use large open spaces, places where trees do not cast shadows, and to install special fences around them. It should not be overlooked that it may break if hard objects are touched during installation. If the panel breaks, it cannot be repaired. There are several advantages to using solar energy. Unlike other energy sources, solar energy does not run out. Installing and using solar panels is an excellent solution for using electricity and heat energy. According to NASA research, the sun will not spare our planet for another 6.5 billion years. The potential of solar energy is very high. The usable energy source is measured in terawatts. This is 20 times more than the demand. In addition, it is impossible to waste solar energy, so the future generation can easily use this energy.

The sun's rays can reach any point on the planet Earth, it is not only the countries located around the equator, even the North Pole can easily use solar energy. Currently, Germany is the leading country in the use of this energy.

Safe for the environment. Currently used energy sources not only cause great damage to the environment, but it is impossible to replace them. Solar energy is an exception. Production and use of solar panels are absolutely safe for the environment. No noise. There is absolutely no noise during production and use. Savings. Low cost to use. There are many fronts that can be used.

### **CONCLUSION**

According to the expert, a citizen who wants to install will not need to get permission from anyone. Just contact the company, place an order and install it. After that, the State Services Agency will be notified by phone. After they explain the necessary steps and notify the Regional Electricity Networks, special employees will come to the consumer's house. It's much easier for individuals and those who want to install up to 20 kW: A citizen simply submits an application, comes and installs, and concludes a contract.

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