



Solar cell research at an altitude of 3340 meters above sea level

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Providing electricity to consumers in the mountainous regions is one of the urgent problems of power engineers. Laying and maintenance of power lines is expensive because of the difficult terrain and climatic conditions. Providing a heating system for heating boilers, requires the acquisition and delivery of large quantities of combustible material. The heating season in the highlands lasts up to nine months. Considering all the costs of electricity consumption and heating, it becomes necessary to conduct research and evaluate the economic efficiency of using solar power plants, focused on providing electricity to consumers in mountain regions.

In order to create a scientific basis for solving innovative problems in solar energy at the Tien Shan high-mountain cosmic ray scientific station (TSHSS), located at an altitude of 3340 meters above sea level, initiative work is underway to create a solar power station (SPS), assess its effectiveness, safety, environmental friendliness and reliability in work.

At the moment, a solar power station has been created at an altitude of 3340 meters above sea level. A comparative analysis of the results of generating electricity from the same type of solar power plants located at altitudes of 800 and 3340 meters above sea level was carried out. It is shown that the amount of electricity generated by a solar power plant at an altitude of 3340 is 20 percent more than at an altitude of 800 meters.

References

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